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Hall, Peter

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The Bay Area in the
Twenty-first Century:
Shall We Survive?

Peter Hall

February 1990

University of California at Berkeley

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THE AUTHOR

Peter Hall is Professor of City and Regional Planning at the University of California at Berkeley. He has been Director of the Institute of Urban and Regional Development since January 1989.

For over thirty years he has researched the planning problems of the world's great metropolitan areas. His books include London 2000 (1963), The World Cities (1966; Third Edition 1984), Urban and Regional Planning (1975; Second Edition, 1982), Great Planning Disasters (1980), Cities of Tomorrow (1988), and London 2001 (1989). He has just completed, with Ann Markusen, Scott Campbell, and Sabina Deitrick, The Rise of the Gunbelt: The Military Remapping of Industrial America, to be published by Oxford University Press in 1990.

PREFACE

Somewhere among the Bay Area's 5.7 million people, there may be someone unaware that a debate is taking place about the region's future. He or she would have to read no newspaper, see no TV, hear no radio. The problems of the Bay Area--housing affordability, land shortages, traffic gridlock, waste management--have become media staples.

Yet even so, this is an area where optimism reigns. It may be bad this year, but somehow we'll muddle through. The media always hype every issue--don't they? Few sense, perhaps, that the area's dilemmas could prove its eventual undoing.

UC Berkeley's Institute of Urban and Regional Development was founded 26 years ago to study just these kinds of issues, at an earlier time when they loomed large. Now, it is more than high time that IURD started to examine them again--dispassionately, and with the accumulated expertise of our distinguished Faculty associates.

Like George Bernard Shaw and the other founders of Britain's Fabian Society, IURD has a policy that it has no policy. Instead, we offer our seminar room for informed discussion and debate, and our presses for publication of individual views. During 1990, we intend to do just that as we focus on the future of our local region. We particularly hope to provide informed input to the work of Bay Vision 2020, as it works to develop a future picture of the way the region could develop.

This is the first of a series of papers, which we offer to the several groups already involved in trying to formulate policy recommendations for the area--particularly the Bay Vision 2020 Commission, which has just begun its deliberations. It is fundamentally, intentionally, unoriginal: it aims to

cull, from the mass of often disparate and fugitive literature on the subject of the Bay Area's history, geography, planning, and current problems, a kind of executive summary of what is known and what remains to be known. It has been written to set a general framework for what, within IURD, we call our Bay Area Debate.

Your comments and criticisms will be welcome; we hope to find room for at least some of them in our new IURD newsletter, the IURD Universe.

Peter Hall
February 1990

1. SAN FRANCISCO'S BURNING!

The San Francisco Bay Area is in trouble, potentially deep trouble. But the people haven't heard the news. It's as if it were 5:03 p.m. on the afternoon of October 17, 1989: the citizenry go about their everyday business, unaware of the travails to come. This next time, though, the earthquake and the fire are not going to well up from the San Andreas Fault: they will spring from even deeper global forces that threaten the region's economic base, at the very moment that explosive growth seems to represent the problem of the hour. Indeed, ironically, growth and its management represent part of the coming problem: the more the region struggles to contain the upward forces, the more it risks precipitating a potentially catastrophic turndown.

And seismic hazards, now obsessionally on everybody's minds, could just prove to be the triggering force that turns overheated growth into uncontrollable decline.

How to handle that bundle of problems is the burden of this IURD working paper. An advance warning: there is no sure-fire solution. But there are some pointers, which policy-makers--and every concerned Bay Area resident and worker--need to comprehend. Before coming to answers, though, we need to understand the question.

Basic to everything else is the region's economy. For close on half a century, the Bay Area has been one of the world's greatest economic success stories. Since Gold Rush days it has been the banking center of California, a state now become so rich that as a nation it would count sixth or seventh in the world in gross national product, surpassing the People's Republic of China, Great Britain, and Italy (Teitz and Shapira 1989, 1). In the post-World War

Two period it has become one of the leading world centers of high-technology manufacturing, especially in the field of semiconductor fabrication and associated information technology. Because this industry is quintessentially innovative, it runs on a huge labor-intensive infrastructure of research and development; and because it leads the world, it generates high incomes. Together with the incomes of the financial service sector, these function as a gigantic economic growth pump, creating further jobs in both the producer service jobs like accountancy and law, and consumer service jobs in the form of hotels, restaurants, bars, and other services that help make the city one of the most agreeable in the world.

It is a rare case of a virtuous economic circle. But it is threatened. The region's twin economic bases both face competition from outside, which could progressively erode them. The banking sector has progressively lost share to Los Angeles, which--with nearly twice the regional population and economic base--is fast-cementing its position as the capital of the western Pacific Rim. Because such a vast superstructure of associated services is based on it, this loss is potentially very serious. High-tech manufacturing faces a challenge from a different quarter: the opposite side of the Pacific Rim. Japan is gaining a stranglehold over the most advanced and complex forms of semiconductor fabrication, which could make Silicon Valley dangerously dependent on imported supplies. And, though the industry is far less defense-dependent than it was a quarter-century ago, nevertheless the abandonment of SDI and the de-escalation of the global arms race could spell loss of a significant sector of business, significant just because it may be at the loss-leading technological edge.

The irony is that while these economic shadows are high on the horizon --rather like a fog bank that has already breasted the Golden Gate and is

heading inland--the hot sun is fuelling feverish growth elsewhere. Financial and other business services are heavily constrained by lack of office space and rising rents. They also find that their potential labor force is moving to ever more distant suburbs. Silicon Valley firms, similarly, find it difficult to expand within Santa Clara county, particularly because so many of their workers must now undertake long and arduous commutes from Santa Cruz or the I-680 Corridor. The result is outward movement, as the work chases the workers: of financial and business services into campus office developments in Walnut Creek, Pleasanton, and Dublin, and of Silicon Valley firms into East Bay locations or even further afield. But in turn, this helps fuel further rises in the costs of residential real estate, leading to a further round of the leapfrogging process as people find homes in ever more distant residential subdivisions, across the hills and into the Central Valley and Monterey Bay.

The resulting pattern--a polycentric city, with islands of employment separated by wide suburban housing tracts--is not in itself good or bad; it is a natural reaction to the realities of growth and high land costs in the Bay Area's economic heart. But it brings with it at least four associated negative consequences. First, it results in a costly and inefficient commute pattern, with hundreds of thousands of suburb-to-suburb automobile trips to which conventional public transportation offers no viable alternative. Second, the resulting strains--paralysis on the region's freeways, increasing length and stress of the daily commute, worsening air pollution--make the area less and less attractive in terms of quality of life. Third, the inevitable result is yet further pressure for ever-more-distant growth at the region's perimeter--which, by now, has lapped far beyond the conventional nine-county definition embedded in official statistics. And fourth, this in turn combines with fiscal pressures on local government to create a climate of hostility to

growth in general: a widespread philosophy of NIMBYism on the part of local communities, who oppose any change that might bring further deterioration.

Thus the area's very success brings consequences that simultaneously erode the traditionally high quality of Bay Area life--and, in a kind of dialectical reaction, threaten its attractiveness to business. How to square this particular circle--how to maintain the region's economic momentum, while guaranteeing its world-renowned life quality and life style--is perhaps the number one question facing Bay Area policymakers today.

But, before we can answer it, we need first to understand how the region got the way it did. The Bay Area's history has indelibly stamped its sociology, its politics, its collective consciousness. They prove to be a large part of the contemporary problem, but also perhaps a part of the solution.

2. AMERICA'S ANARCHO-SOCIALIST INNOVATION SHOP

Every visitor to the Bay Area notices that it is a very special kind of place. Some Middle Americans may hate it, some New Yorkers may love it, but it is different from either. The special quality has quite a lot of European cosmopolitanism, coupled with a defiant liberalism and a disdain for the conventions that shackle other places, and a distinctive Californian willingness to suspend disbelief and try anything at least once. It's the quality that gave the city and its region the Grateful Dead, the Flower Power revolution, Silicon Valley, and the largest Gay population of any city in the world. It did not happen by accident; it is a result of a very special 200-year history.

First came the Spanish, who brought a very old southern European culture, quite different from that imported into the East Coast by either Yankee traders or Southern planters. Then came the Union and the Gold Rush, which overnight made the city the Barbary Coast: a wild capital of mayhem and madness, where almost anything went. Mark Twain, an early settler, wrote of the California of those days that "it was a population that gave California a name for getting up astounding enterprises and rushing them through with a magnificent dash and daring and a recklessness of cost or consequences, which she bears unto this day--and when she projects a new surprise, the grave world smiles as usual, and says, "Well, that is California all over" (q. Bagwell 1982, 24). Those two basic strains sank deep into the culture of the city as it matured to become the commercial capital of the West Coast. The English Fabian Socialist pioneer Beatrice Webb, visiting San Francisco about 1890, commented that the city was

isolated and unconcerned with any other part of America. It is out and out the most cosmopolitan city I have yet come across. It has no standards, no common customs; no common ideals of excellence, of intellect or manners--only one universal anarchy, each race living according to its own lights, or rather

according to its own impulses . . . To the person who wishes to live unto himself without any pressure of law, custom or public opinion, San Francisco must be a Haven. If he combines with this an "individualism", a Bohemian liking for a variety of costume, manners, morals and opinions, San Francisco must be a veritable paradise (Shannon 1963, 141, q. Kahn 1979, 26).

As Judd Kahn perceptively comments, this anarchy made the city peculiarly difficult to govern; it still does. Gunther Barth, the Berkeley historian, comments that from early days in San Francisco, "The ordering hand of government was weak, and the residents did little to strengthen it. The builders of San Francisco . . . cherished individual freedom and personal dignity more highly than the advantages of planned order" (Barth 1975, 230).

But there was another strangely contradictory side to San Francisco's political life. Perhaps in reaction to the resulting anarchy and corruption, early in the twentieth century it started to vie with cities like Glasgow and Frankfurt as an exemplar of efficient municipal socialism. James Duval Phelan, the turn-of-the-century mayor, consciously called upon European models in commissioning the famous Burnham plan for the city and calling for municipal enterprise. A decade later, his successor James Rolph began his epic nineteen-year reign in a burst of civic activity that included the Panama Pacific International Exposition, building of the Civic Center, the start of the Municipal Railway, and the beginnings of what was to become the Hetch Hetchy water project. By the 1920s, the city was a model of municipal socialism.

But it was socialism of a particular kind: the kind with which capitalism could work hand-in-hand. When Rolph's great city engineer Michael M. O'Shaughnessy drove the Twin Peaks Tunnel--then as now, longest streetcar tunnel in the world--in 1917-18, it was to open up huge land development opportunities in the Sunset and Lake Merced districts, hitherto almost inaccessible (Perles 1981, 63-64). It was the same approach as the creators of BART would

use a half-century later: by tying ever more distant suburbs directly to the downtown, they enhanced the accessibility and hence the value of the city's core. (And indeed it is a tradition that goes back to the first transcontinental railroad, built with the aid of generous Federal land grants which could be used as collateral to raise capital, and which would eventually bring huge developmental profits for the railroad barons.) Over on the other side of the water, in the East Bay, F.E. "Borax" Smith and his Southern Pacific rivals produced the same effect by purest commercial competition, virtually bankrupting each other in the process: their streetcar lines, fanning out from the Trans-Bay ferry termini and deliberately built to underpin lucrative real estate development, made possible the development of east Oakland, Piedmont, Berkeley, and Albany (Demoro 1985, Ford 1977). It was the realization that they could move commuters so quickly and cheaply across the Bay that goaded the city into its own venture in real estate promotion (Perles 1981, 83; cf. Vance 1964, 44). But it was the private developers, not the city, who reaped the profits; their efforts, decades before mass automobile ownership, produced what James E. Vance has called a "prairie-form metropolis" that spread freely over the surrounding countryside (Vance 1964, 52).

That contrast however underlies another point. As Mel Scott has well emphasized, "the bay at times seems a sinister element, encouraging competition between ports, political bickering over the location of additional bridges, and endless arguments over whether industries discharging wastes into its waters are properly regulated" (Scott 1959, 2). Particularly, it has encouraged intense economic and political rivalry. San Francisco, which has always regarded itself as simply "The City" of the Bay Area if not of California, has been intensely jealous of its upstart eastern neighbor ever since the day in 1869 that the "Big Four" of the Central Pacific Railroad--Leland Stanford,

Charles Crocker, Collis P. Huntington, and Mark Hopkins--accepted the offer of Oakland's first mayor, Horace W. Carpentier, and joined the first transcontinental line to Oakland rather than across the southern end of the Bay and up the Peninsula (Bean and Rawls 1983, 167-174, 177; Bagwell 1982, 42-7, 51-2). It was truly a fateful day, because--despite repeated campaigns for a cross-Bay rail bridge--the terminal remained on the eastern side, enhancing Oakland's role as port, warehousing, and industrial city.

True, San Francisco acquired an important industrial base of its own--in food processing, lumber, paper, and even movies, where for a short time between 1910 and 1920 the Bay Area rivalled Los Angeles. But more and more, a spatial division of labor developed, with San Francisco as the service city, Oakland and other East Bay cities as the places that made and traded things. Oakland soon developed industries to process the materials that came through its port: lumber, carriage-making, breweries, fruit and fish canneries, cotton mills; after World War I, it diversified into shipbuilding and automobiles (Bagwell 1982, 61-76, 189-197). Shipping and the railroads created thousands of blue-collar jobs and incidentally brought Oakland its first major wave of black workers, the Pullman Car porters whose community in West Oakland became a black middle-class enclave. Oakland, and other East Bay Cities, became important commercial service centers in their own right, whose citizens had little more than a residual relationship with "The City" across the water (Vance 1964, 55). The long and tortuous history of BART planning was marked by constant rivalries between San Francisco and Oakland commercial interests, resolved only by the 1956 Regional Rapid Transit plan that effectively looped the system through the Oakland downtown, and then used fast transbay transit to compensate for the loss of time this involved (Adler 1980, 185-6).

That division was to remain the basic one until World War II, when San Jose began its rise from relative obscurity to a city which would snatch from San Francisco, finally, the role of the most populous city in the whole of the Bay Area. This story--which would be extraordinary anywhere else but here--was first a result of wartime industrial location, then of the growth of Silicon Valley. Until the second war, San Jose was a small railroad junction and agricultural processing center at the southern head of the bay; it had a mere 94,000 people in 1950 and as few as 204,000 even by 1960. What caused its rise was explosive growth of manufacturing industry, first in the form of major engineering and electrical factories in the late 1940s, then through electronics startups in the 1950s and 1960s. Though the historians are still arguing, two facts appear incontrovertible: first, Silicon Valley did arise in large measure through the efforts of Frederick Terman of Stanford University to build university-industry linkages; but secondly, it was only possible because of the Cold War and the missile race, which created military contracts to launch the fledgling semiconductor industry. Innovation, company swarming, and commercial spinoff--above all, the personal computer revolution of the late 1970s--did the rest.

Whatever the precise mix, Silicon Valley fundamentally altered the geographical basis of the Bay Area: a twin-city core was replaced by a triad of cities, neatly arrayed in a narrow triangle. Polycentrism, a reality almost since the first development of the region, now became even more dominant. By 1964, Berkeley geographer James E. Vance could point to the Bay Area as the archetype of the "New City": "this non-centric city", he wrote, "neither seeks nor flies from the center. Rather it disregards it" (Vance 1964, 68). Based on automobile commuting, it had a new structure all its own: one no longer based on strong radial flows to downtown areas, but on a complex of flows from

suburban jobs to suburban workplaces. It was a region of overlapping urban realms, of which the San Francisco financial district was only one among many (Vance 1964, 71-77). "In this creation of a metropolis-of-realms", he wrote, "we witness the birth of a new urban form" (ibid., 89).

He proved prophetic. In the intervening quarter-century, the metropolis of realms has grown progressively ever larger, more polycentric, and more complex. To the triangle of core cities have been added a whole host of smaller places which act as semi-independent centers of employment and service provision. Silicon Valley itself encompasses a whole string of them; in the 1980s another linear complex has developed around suburban office parks along the I-680 corridor from Walnut Creek through Pleasanton to Dublin; another string follows 101 northwards through Marin County. What the railroad and the street-car did for an earlier era, the freeway has done in this. Again--just as in the extension of the Municipal Railway to the ocean, just as in the building of BART--huge public infrastructural developments have valorized land and provided opportunities for large-scale private development. But with this difference: that whereas the old rail-based systems linked downtown cores with residential and local service suburbs, the freeways have provided the framework for the new multi-nodal urban form. The reason is that--partly because of the Bay Area's unique water- and mountain-constrained topography--they have only in part followed radial traces; the entire network has more the character of a loose grid of north-south parallel arteries and cross-bay, cross-mountain, east-west connectors which make it equally easy (or difficult) to go from anywhere to anywhere else.

They have thus massively reinforced the Bay Area's traditional separatism: the traditional rivalry of San Francisco and Oakland is now the rivalry of every place against every other. A ring city based on water, as Mel Scott

observed, is always especially prone to such fissiparousness; but it is not inevitable, as witness the unified city administrations of Stockholm, Venice, Leningrad, New York, Hong Kong, or Sydney. There was another factor: the traditional American distaste for large-scale, single-purpose local administrations. It has some strengths, but in the Bay Area today it is proving a source of deep weakness.

The reason is that the area's complexity is proving its undoing. As any of its six million residents can testify, it is no longer working; or at least, it is no longer working as it used to, or as it might. The multiplicity of criss-cross trips by automobile, which a quarter-century ago appeared manageable through the then-new freeway system, now appears completely out of control. The difficulties of commuting force employers and employees alike to ever more desperate expedients as they leapfrog each other in their outward race; but they succeed merely in making the situation worse, for themselves and for everyone else. Things fall apart; the center cannot hold.

History thus plays strange ironies. From the very beginning, California's style set city against city, locality against locality. From the earliest days, it manifested itself in an anarchistic, devil-take-the-hindmost political tradition which finally brought a counter-movement in the Progressive Era of municipal reform. At least from the days of the first transcontinental railroad, it established a tradition of using federal grants to create basic transportation infrastructure that would then serve as the basis for private profit. These traditional styles proved to work well enough. But they are no longer working well enough; and it is time for a new Progressive Era.

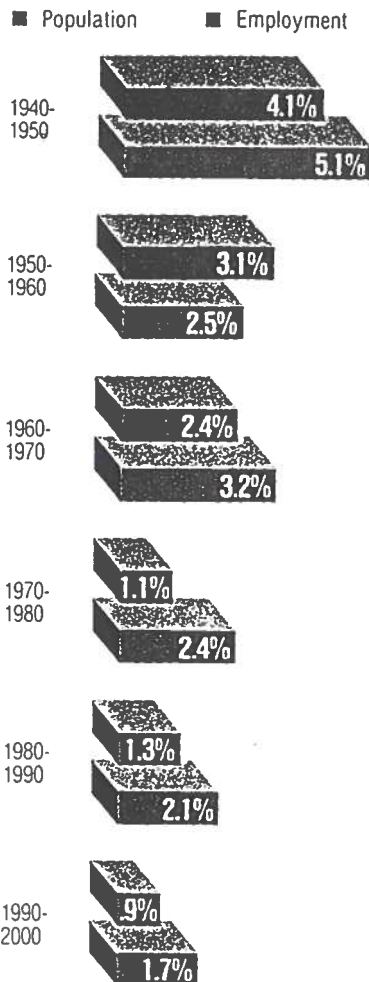
3. AN ERODING ECONOMIC BASE

The Bay Area is blessed with an exceptional economy: an economy happily built upon the sectors that, ever since World War II, have recorded the fastest growth in California, in the nation, and in the world. From an early head start, San Francisco has built and then maintained its lead as the primary banking and financial center of America's Pacific coast. And because this coast represents an important part of the Pacific Rim, the fastest-growing regional economy on the globe, its financial institutions are extremely well poised to play an enhanced role in world exchange. Quite separately, the area's strengths in higher education and research have spawned an extraordinary proliferation of leading-edge manufacturing. And, over its short forty-year life, this new industrial strain has shown a remarkable ability to adapt and change in response to changing circumstances. Starting from a fairly narrow base in component production--the manufacture of the basic semiconductor--this industrial complex has progressively moved first to embody the component into ever more sophisticated hardware, secondly to move from military to commercial applications, and finally to move away from hardware into software.

But, underlying these massive and obvious strengths, there are less visible weaknesses. In March 1989, the Bay Area Economic Forum, a partnership of the Association of Bay Area Governments and the Bay Area Council, issued a dramatic publication titled A Region at Risk. The front cover carried the warning about the Bay Area economy:

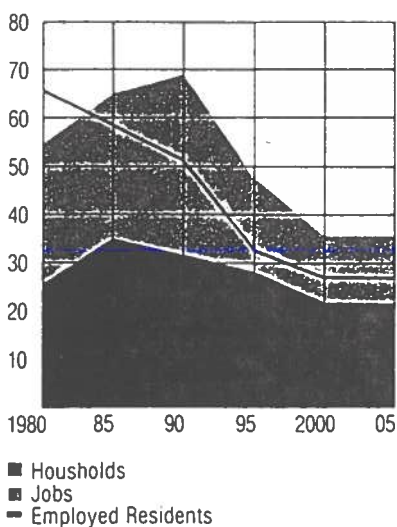
It has performed well for more than four decades. Economically, we are in a place most regions can only hope to be. The question is whether we can stay there. While the world economy has grown ever more competitive, we have grown complacent. We take prosperity for granted--but forget that the future comes with no guarantees. Unless we change direction now, we are A REGION AT RISK.

Figure 1
Bay Area Annual Growth Rates



Source: U.S. Census

Figure 7
What the Future Holds:
Slowing Rates of Growth



Source: ABAG. Projections '87

Table 1
Indicators of Bay Area Growth (000)

	1985	2005 Forecast % Change	
		Scenario A	Scenario B
Population	5,532	6,663 20%	6,800 23%
Households	2,094	2,666 27%	2,700 29%
Jobs	2,805	3,894 39%	4,300 53%
Labor Force	3,036	3,912 29%	4,200 38%
Household Income (1985\$)	\$39,200 (A) \$40,600 (B)	\$47,400 21%	\$50,800 25%

Sources: ABAG, Pacific Gas & Electric Company

From the Bay Area Economic Forum, The Bay Area Economy A Region at Risk, 1989

Figures 1 & 7 (left) are from Bay Area Council, Making Sense of the Region's Growth, 1988

Table 2
Average Annual Bay Area Growth, Past and Forecast

	1972-80	1980-88	1990-2005 Scenarios	
			A	B
Population	59,000	77,000	48,000	63,000
Households	42,000	30,000	27,000	30,000
Jobs	93,000	54,000	51,000	74,000
Labor Force	73,000	58,000	38,600	58,000

Sources: ABAG, Pacific Gas & Electric Company

From the Bay Area Economic Forum, The Bay Area Economy A Region at Risk, 1989

Why? The report spelled out the reasons. First, Bay Area employment growth has recently shown an ominous slowing-down: between 1985 and 1987, a period of general strong economic recovery, it was only 1.4 percent a year, half the California average rate. The main reason was a recession in the semiconductor industry, which rippled throughout the electronics sector and reduced Silicon Valley's job effectively to zero. But it was also due to restructuring in the financial industry, partly arising from deregulation and increasing competition, coupled with a slowing in construction activity both in the R&D and manufacturing sector, and in offices. The question is whether this represents a temporary blip, or something much more serious and longer-term.

Second, the report pointed out, the Bay Area is becoming increasingly, dangerously, dependent on the performance of Silicon Valley. Taking into account jobs in related sectors, high-tech supports no less than one in every eight workers in the area--and these contain a disproportionate number of the highest-paying positions, with multiplier effects throughout the region. And Silicon Valley is vulnerable to overseas competition, above all from Japan's determined assault on the semiconductor business. The reaction of American manufacturers has been to create the Sematech consortium--but this is located not in the Valley, but in Austin, Texas. It may be that the right strategy is the one that has emerged in recent years: Silicon Valley firms will move increasingly out of hardware, above all componentry, and into high-value-added software. This option, surely, needs further research.

Third, A Region at Risk points out, the quality of the region's workforce does not remotely measure up to the demands of one of the world's most sophisticated economies. What is important here is not the number of potential workers --though even that is growing more slowly than it did--but its quality. California's school system generally, and that of the Bay Area particularly, is perform-

ing badly: SAT scores are among the poorest in the nation, and are failing to show noticeable improvement. One-third of students actually drop out of school before graduation. California ranks near-bottom of all states in school spending and near-top in size of classes. Yet, because of the large numbers of immigrant children in the system with special linguistic problems, the state should be spending extra on educating children in smaller classes. (The Center for the Continuing Study of the California Economy has estimated that between 1987 and 1995, over 70 percent of the net growth of the entire Californian workforce will consist of minorities, with Hispanics accounting for 38 percent alone [Teitz and Shapira 1988, 20].) Here the pernicious effects of Proposition 13 are already evident; California is actually living off the accumulated capital of its excellent school system of 25 or 30 years ago, and this will soon dissipate.

Two further problems, highlighted in the report, are closely associated. First, housing costs are among the highest in the nation, and make it difficult to recruit key workers. New housing starts have systematically lagged behind the growth in households, and house prices have risen at an average of 7 percent a year; only 15 percent of Bay Area residents can now afford the cost of a new home. Second, traffic congestion, which has deteriorated spectacularly during the 1980s as highway spending has been cut back: on the worst-affected stretches, between 1980 and 1987, evening peak speeds have dropped from 55 to 20, 15, even 10 miles an hour. This spells increasing commute difficulties, worsening the problem of matching jobs and workers. Much of the new job growth in the last two decades has been in suburban locations ill-served by transit facilities, and affordable housing in these neighborhoods has often been lacking --thus exacerbating the commute problem. In particular, much of the job growth has been in the South and East Bay, while much of the new housing has been on the northern fringes.

The very affluence of the region is very unequally distributed, the report warns. For the economic structure is highly polarized between a highly paid minority and a larger group that is quite modestly paid; and there is a depressed underclass that suffers high unemployment, highly concentrated in certain localities. (Earlier research by ABAG showed that in 1980, 20 percent of households earned no less than 45 percent of total income, while the bottom 20 percent earned as little as 4 percent [ABAG 1985, 2].) Many Bay Area families owe their position to the fact that they contain more than one earner--so, if global competition threatens these jobs, the results for the average household could be dire. In other words, the region's famed quality of life may rest on extremely unsure foundations.

A Region at Risk, notice, is no panic-mongering report: on the contrary, it comes from two of the area's most respected regional organizations and is backed by massive research. It suggests a number of key issues that need to be addressed. The Bay Area needs to maintain its innovative technological leadership. It needs to find ways of meeting the expected shortages of skilled labor. It needs to make its school system adequate to the job. It needs much more affordable housing and it must find ways to prevent its highway system from congealing. The key lies in new patterns of growth, which bring jobs, homes, and transportation into a more sensible relationship. All of this represents a tall order--especially of scarce dollars. And it entails a spirit of regional cooperation, the ability to sink differences in a common cause, that has not often been evident in the Bay Area's history. The report warns:

Because of the fragmentation of decision-making bodies in the Bay Area, each community and each interest group has pursued its own self-interest without the guidance of any larger vision. The lack of common aims--combined with a lack of funding--has prevented us from solving areawide problems and pursuing regional goals (Bay Area Economic Forum 1989, 3).

Part of the problem, clearly, has already been spelled out in Chapter 2: it is the anarchistic, devil-take-the-hindmost tradition of urban development and urban government in the region. Another part is that the region is a victim of its own past economic success. As the report says: "The reality is that the Bay Area's current prosperity is rooted in the past, and we are doing little to provide for the future" (ibid., 5). This has bred the attitude that nothing can ever really go wrong: the big quake will never come. Whether or not this is a wise attitude in regard to seismic forces is problematic: when the economy is concerned, it is probably disastrous. The history of nations and of empires provides all too many examples of that: it would be ironic if twentieth-century California were to follow in the footsteps of eighteenth-century Spain.

These warnings are underlined, if anything, by long-term employment projections. The latest we have, from the State Economic Development Department, are based on 1980-85 trends and so take no account of the 1985-87 turndown. Even so, they show 1983-93 projected growth as slower than the state average for the five-county San Francisco-Oakland Metropolitan Area (though the picture would appear more favorable for the entire nine-county ABAG area). Particularly notable is the dominance of the services and retail trade sectors, which account for nearly 60 percent of the increase. The regional economy will become even more polarized, with strong growth in both highly-skilled professional and technical workers, and in low-skilled service workers, and a relative decline in blue-collar jobs (State of California 1986, 5). Some of these trends are so deep-seated that they are probably inevitable.

What is really uncertain is the long-term future of the region's major growth sectors. The Bay Area Economic Council's report developed two different scenarios for an even longer period, from 1990 down to 2005: one showed an average job growth of 51,000, another of 74,000, both below the 1980-88 level,

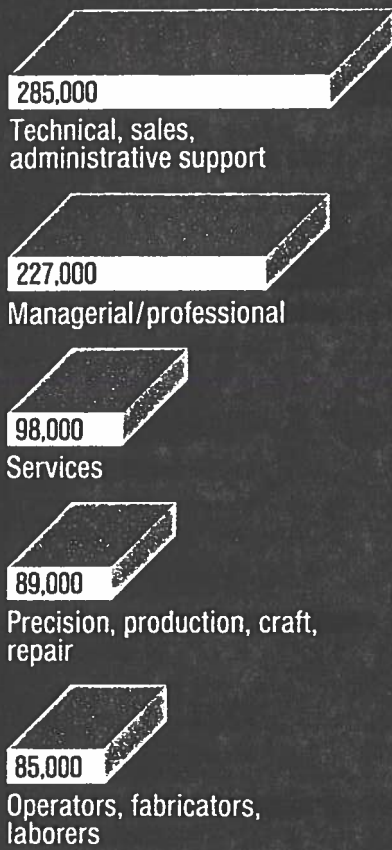
and much below the average for 1972-80. Even so, they greatly outstripped the growth in the residential labor force, which was only 38,600 on the first scenario, 58,000 on the second. Clearly, despite the slower rate of growth, the region's employers were going to have to draw commuters from an ever-wider area--or move out to where the workers will be, which will be increasingly in far-distant locations (Bay Area Economic Forum 1989, 16-17).

The best expert guess that we can make about the Bay Area economy, therefore, is a rather paradoxical one. The whole economy is very unlikely to grow as fast as in the recent past, and if the winds of change blow cold the contraction in growth rates could be much more severe than anyone now imagines. Here, the conclusion of a recent report by Michael Teitz and Philip Shapira, on the California economy as a whole, has special reference for the Bay Area:

If California's growth conceals problems and transformations, it also rests on foundations that may not be as firm as optimists would like to believe. The state's economy has become increasingly dependent on uncertain national and international economic and political factors. For example, the technological innovation that generated so many of the trends subsequently experienced elsewhere in the U.S. and the rest of the world has been driven in good part by national defense expenditures that may decline in the future. Similarly, the dramatic growth of foreign trade and offshore production in the state's economy in recent years has made California particularly susceptible to unpredictable changes in international macro-economic conditions and trade policies . . . The state's high technology industries have also become more reliant on imported manufactured inputs (such as semiconductor chips) and are vulnerable to increased international competition and government actions in the U.S. and abroad which influence their shares of domestic and foreign markets (Teitz and Shapira 1989, 2-3).

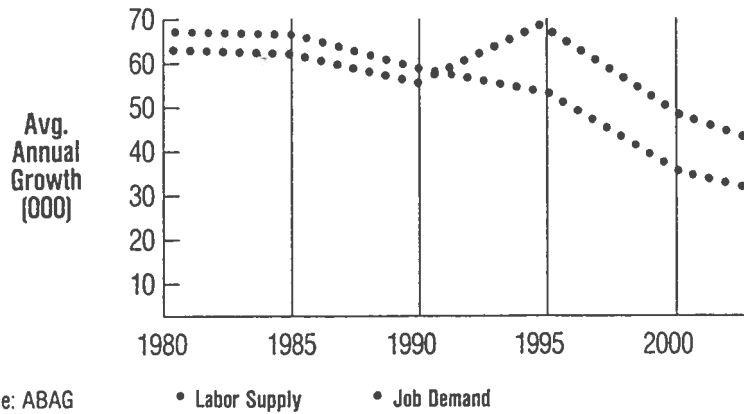
Nevertheless, on most reasonable projections the increase will be so big as to bring massive strains in the area's housing markets and transportation network. And if these prove intolerable, the result could be a further tightening of the screw, resulting in out-movement of offices and laboratories and factories and a further slowing of job growth. This is not fanciful; it is

Figure 9
Bay Area Occupational
Demand 1990-2005
(Scenario A)



Source: ABAG

Figure 8
Growth in Job Demand and Labor Supply



Source: ABAG

Figures and tables are from Bay Area Economic Forum, The Bay Area Economy: A Region at Risk 1989

Table 3
Distribution of Growth in Jobs and Labor Supply

County(ies)	% Share 1980-1990		% Share 1990-2005	
	Labor Supply	Jobs	Labor Supply	Jobs
Alameda, Contra Costa	38%	33%	39%	32%
Marin, San Francisco, San Mateo	19%	21%	14%	20%
Santa Clara	25%	32%	20%	30%
Sonoma	8%	6%	12%	7%
Napa, Solano	10%	8%	15%	11%

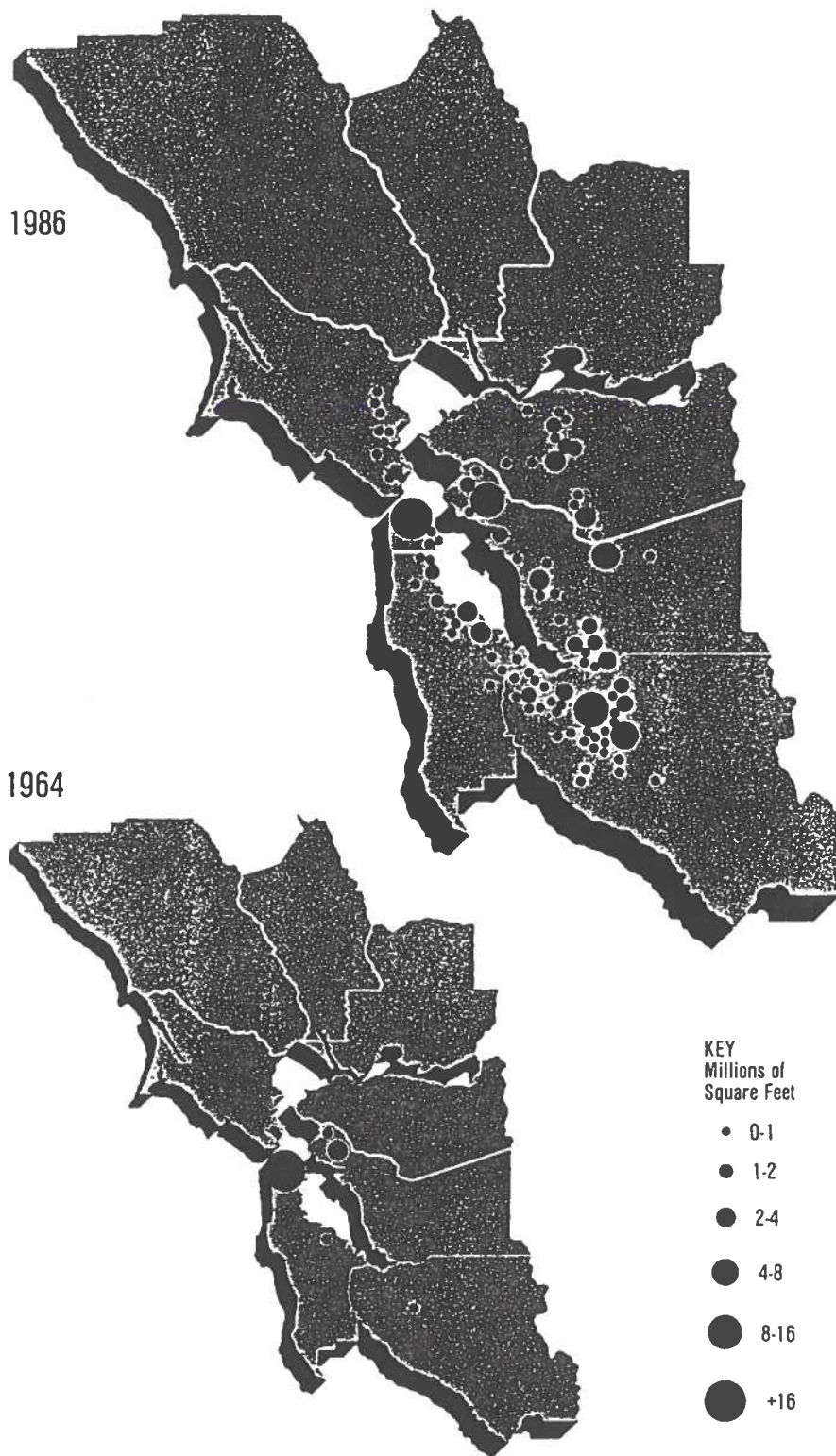
Source: ABAG

already happening. Between 1965 and 1978, only 13 percent of the new jobs in the region were created in the San Francisco and Oakland cores; and in the office-building boom of the 1980s, the great majority of the new space has been added in the suburbs, especially in Silicon Valley and along the I-680 corridor (Bay Area Council 1988, 14-15). News items--like the widely-publicized move of a big chunk of Bank of America operations from downtown San Francisco to Solano County, announced in November 1989--underline the point.

The problem is that housing has not kept step. Walnut Creek zoned generously for offices during the 1970s, then became embroiled in growth controversies and has put a virtual cap on all further development; in Marin County, between 1980 and 1985, office space expanded 70 percent, housing a mere 3 percent (Bay Area Council 1988, 14). So the firms moving into these suburban parks find themselves hoist with their own petard: their workers, in desperation, have had to move even farther out, in a game of economic catch-can.

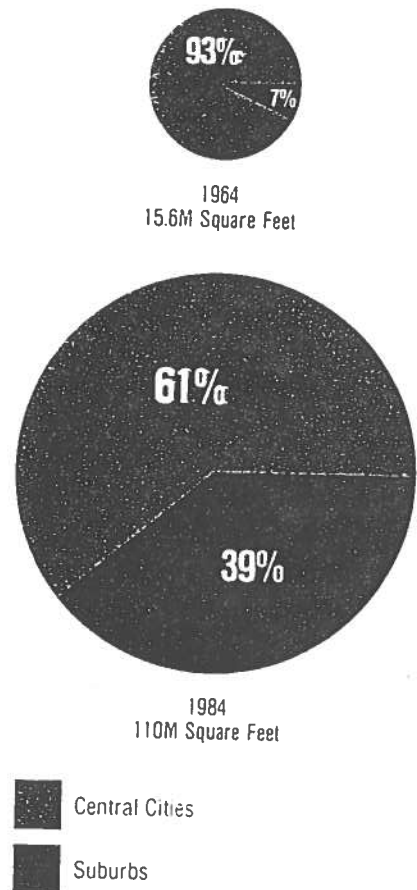
Some draw the logical conclusion. By 1989-9, frequent press items reported that businesses, unable or unwilling to meet the high costs of operation in the Bay Area, were packing their corporate bags. A San Francisco Chronicle poll, in December 1988, indicated that 21 percent of San Francisco businesses had plans to relocate, mostly to other places in the Bay Area; IBM's sales office left Palo Alto in 1988; in February 1989, TRW was reported to be considering relocating half its Sunnyvale operation to Livermore (Flinn 1989, B1; Schneidawind 1989, C1; Viviano 1989a, A5). The same month, the Wall Street Journal reported that "scores of companies weary of the expense of doing business in San Francisco, Los Angeles and San Diego are finding refuge in relatively cheap Madera, Stockton, Fresno and other Central Valley communities, long considered poor country cousins to the states' [sic] more glamorous coastal cities" (Celis 1989, A2).

Figure 5
Distribution of Bay Area Office Space



Sources: G. Divo, Ph.D. Dissertation, UC Berkeley, 1988;
K. Nelson, Ph.D. Dissertation, UC Berkeley, 1984.

Figure 4
Bay Area Office Space
(Millions of Square Feet)



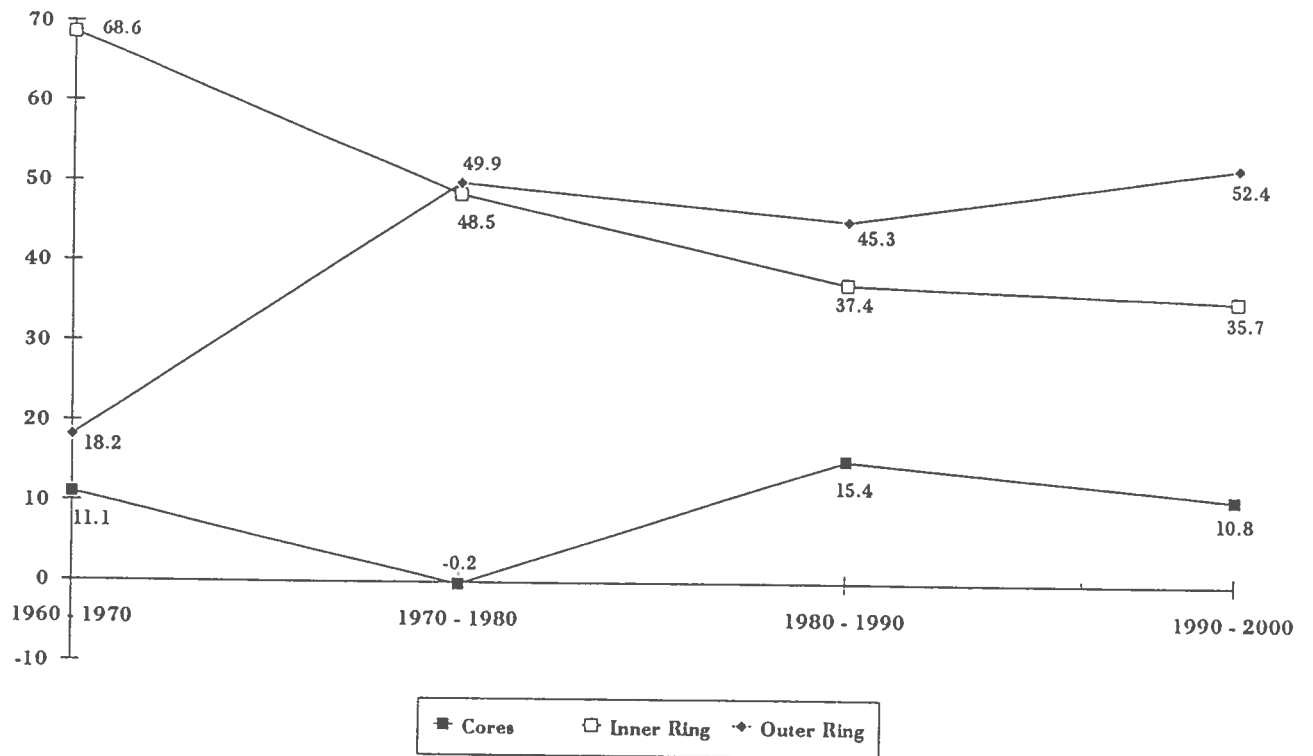
Sources: C. Kroll, Center for Real Estate
Urban Economics, UC Berkeley, 1986;
K. Nelson, Ph.D. Dissertation, UC Berkeley,
1984.

Both figures are from Bay Area Council, Making Sense of the Region's Growth, 1988

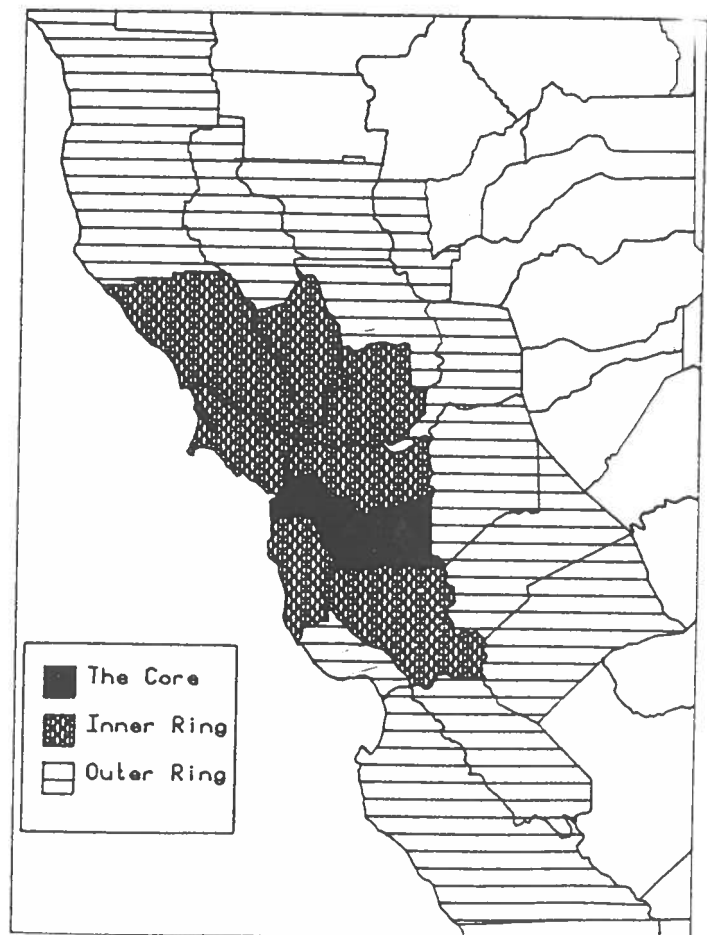
What this means is an effective widening of the San Francisco Bay Area to take in a new ring of counties, stretching north-east and east deep into the Central Valley, south into the Monterey Bay cities. This Greater Bay Area would not merely be much larger than the present nine-county unit; it would also be even more complex in its living, working, and commuting patterns. On present trends, indeed, it is an eventual certainty: the question is not whether, but when.

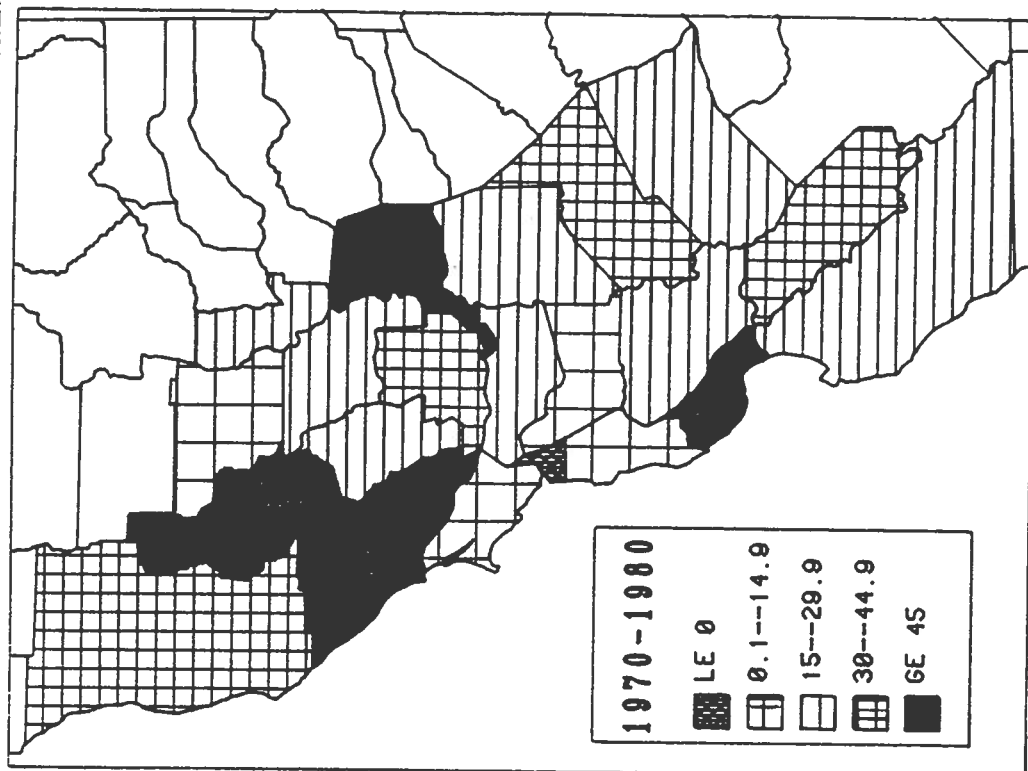
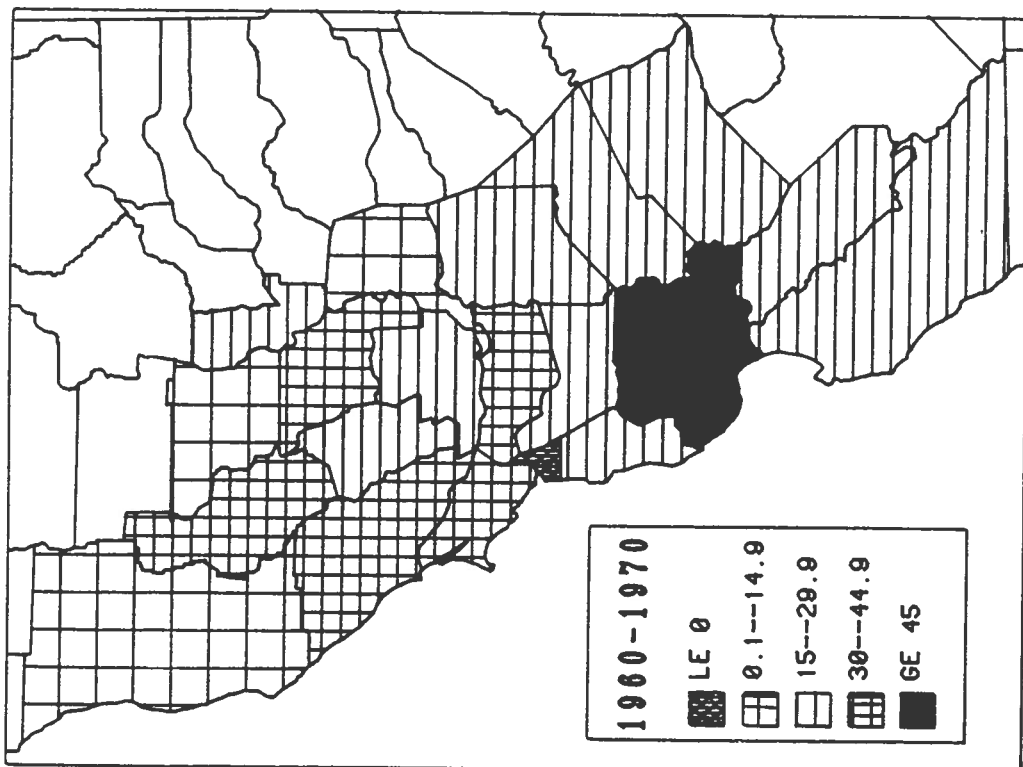
So, in order to understand how the Bay Area communities may start to get their region into some better shape, we need to turn next to two closely associated topics: housing and transportation.

Shares of Population Growth

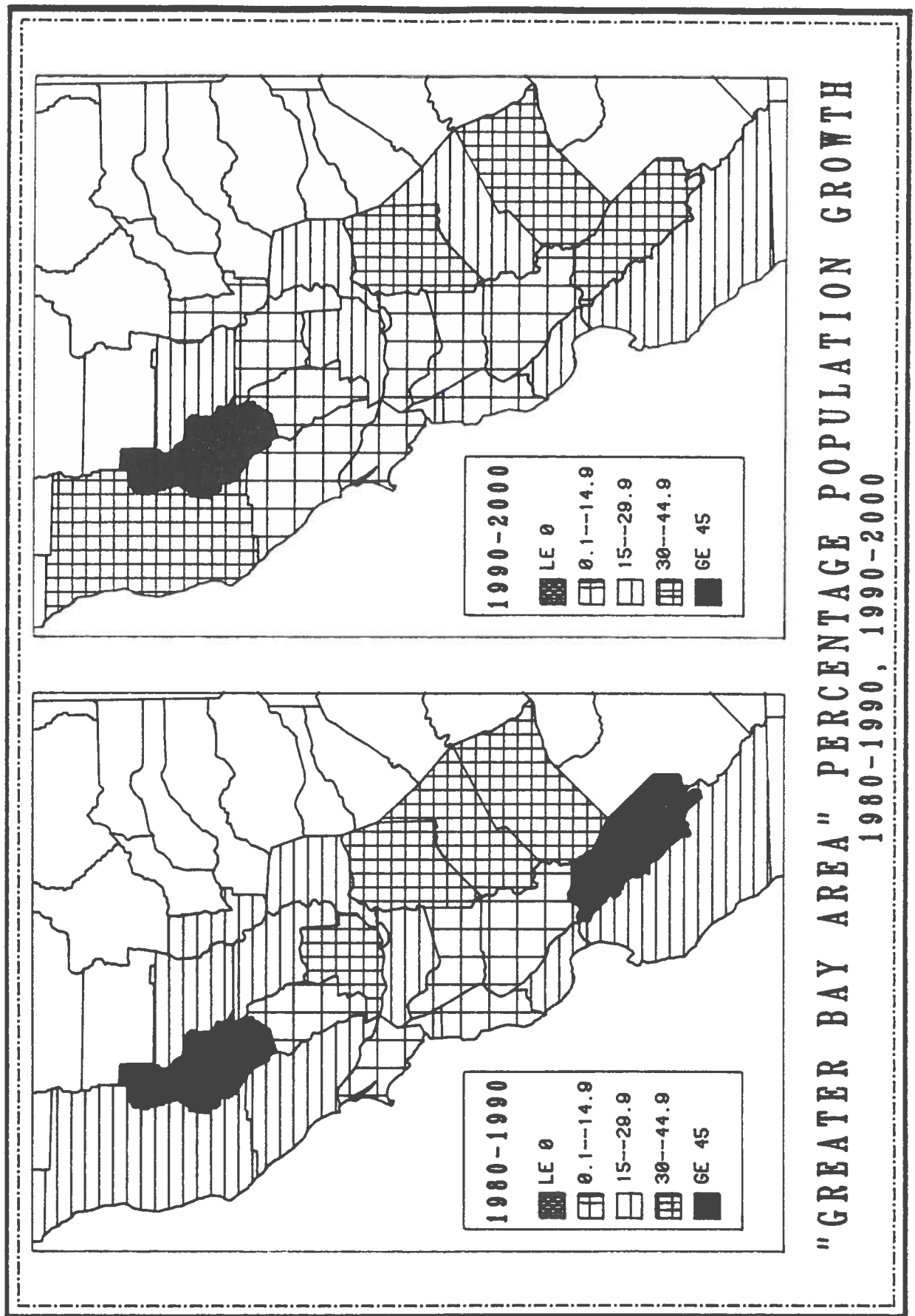


SOURCE: California,
State of, Department
of Finance (1987, 1989).





"GREATER BAY AREA" PERCENTAGE POPULATION GROWTH
1960-1970, 1970-1980



4. TOO MANY PEOPLE, TOO LITTLE LAND, TOO COSTLY HOMES

Many Bay Area residents, especially older-time ones, might be forgiven for thinking that the problem is that there are just too many of them around. True, California is no longer growing at the dizzy rates of the 1940s and 1950s, when the state doubled its population every two decades. But in absolute terms, the figures are daunting enough. The nine-county Bay Area, which the Census Bureau calls the San Francisco Consolidated Metropolitan Area, had some 3.6 million people in 1960. It added 991,000 people in the 1960s, 549,000 in the 1970s, and another 686,000 by 1989, when it numbered close on 5.8 million people; by the year 2000, according to State demographers, it is projected to total some 6.5 million.

But, more or less unnoticed, the wave of growth has been cresting ever farther out from the region's core cities and counties; it has now begun to wash right out of the conventional nine-county region. If we add the ring of eleven contiguous counties--which includes Sacramento--then we obtain an extended Bay Area which, in 1989, is estimated to contain no less than 7.4 million people. And of the growth in this area during the 1970s and 1980s, nearly 2.6 million, almost exactly half--to be precise, 51 percent in the 70s, 46 percent during the 80s--was in these peripheral counties. Further, during the remaining years of the century, the prediction is that more than half--53 percent, or 685,000--will be in the peripheral zone.

There can be no doubt about the result: it will be massive urbanization, in particular in the southern periphery around Monterey Bay, and above all in the Central Valley between Sacramento and Stockton. Indeed, the clear threat is that by the early 21st Century the existing East Bay cities will link up with this latter corridor--following the lines of I-80, I-580, and I-5--to form

a continuous Los Angeles-style megalopolis, nearly 100 miles across. This is not a possibility: on present trends, it is virtually a certainty. The only question is when it will happen. It should concentrate everyone's minds.

For there are several obvious corollaries. The first is that growth on this scale is likely to compound one of the Bay Area's main headaches of 1989: housing affordability. Repeatedly, during the 1980s, surveys have shown that average house prices in the Bay Area have been at or near the topmost point of all major metropolitan areas in the nation--not even excepting New York, Washington, or Los Angeles. House prices jumped 31.8 percent between early 1988 and early 1989 to reach an average \$243,900, again setting an unfortunate national record (Tuller 1989, A10). Only 17 percent of all households in the region, it has been calculated, earn enough to qualify for a loan on a typical single-family home, even if they could stump up a down-payment of some \$45,000 (Bay Area Council 1988, 8). According to a 1988 study, some 492,000 households in the region may already have been paying more than 25 percent of their incomes for housing. In San Francisco, according to this same study, no less than 32 percent of households may have been unable to afford the cheapest range of rental apartments (defined as the cheapest 10 percent); in San Mateo the proportion was 28 percent, in Marin 25 percent, and even in distant Solano the total was 13 percent. The figures suggest that low-income households will tend to migrate ever-farther outwards in search of housing they can afford--thus precipitating and perpetuating the outward drift of population (Bay Area Council 1989a, 3).

The second headache is that communities in the path of the growth wave are becoming ever more resolutely opposed to it. True, their resistance may be of the same order as King Canute's. But they have rather more power over the process than he had. In May 1989, voters in Novato turned down a proposal to

MEDIAN HOME PRICES

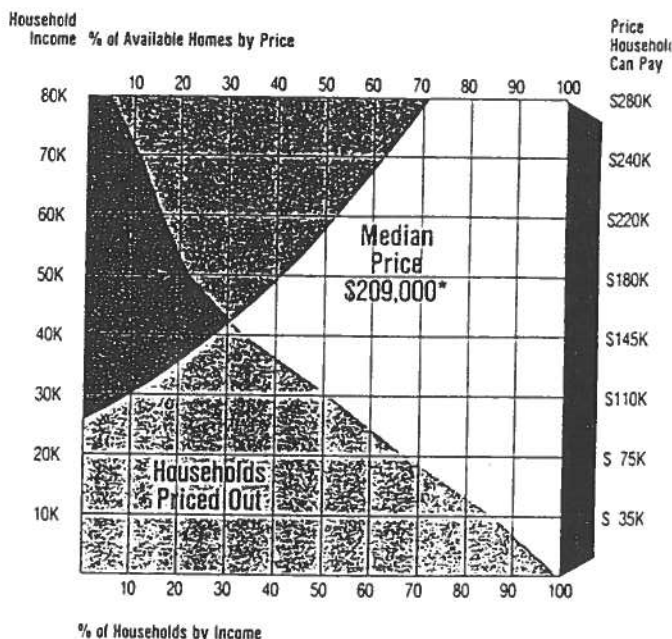
Region	First quarter 1989	First quarter 1988	Percent change
U.S.	\$91,600	\$88,588	3.4%
CALIFORNIA	190,072	151,648	25.3
Bay Area	243,997	185,146	31.8
Orange County	237,887	182,668	30.2
Monterey	215,066	167,042	28.7
Los Angeles	201,024	159,140	26.3
Santa Barbara	199,443	162,353	22.8
San Diego	163,941	134,376	22.0
Palm Springs/Lower Desert	109,193	91,379	19.5
Sacramento	100,256	88,223	13.6

Source: California Association of Realtors

From San Francisco Chronicle, May 17, 1989

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Figure 3
Who Can Afford Housing in the Bay Area



% of Households by Income

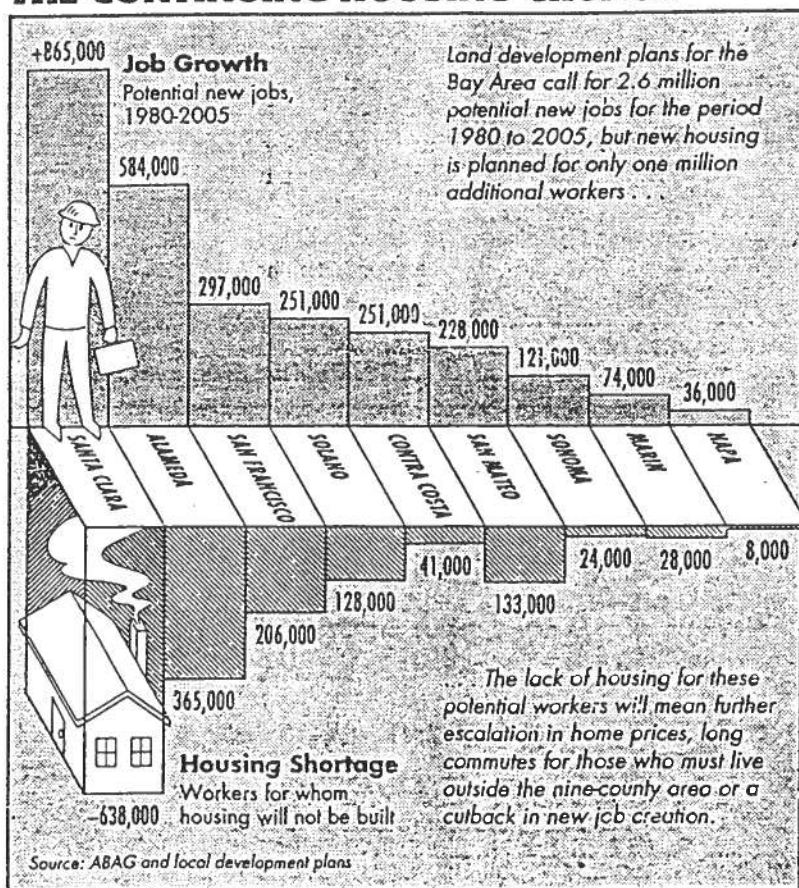
What There Is To Buy
How Many Households Can Buy

*June 1988

Sources: California Association of Realtors, Urban Decision Systems

From Bay Area Council, Making Sense of the Region's Growth, 1988

THE CONTINUING HOUSING CRUNCH



BY ERIC JUNGEMAN/THE CHRONICLE

San Francisco Chronicle, February 8, 1989

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Many Cannot Afford Lowest Cost Apartments

	Low-End Rent *	Income Required (30%)	% Bay Area Families Unable to Afford
San Francisco	\$750	\$30,000	32%
San Mateo Cty.	690	27,600	28%
Marin Cty.	625	25,000	25%
San Jose Area	610	24,400	24%
S. Alameda Cty.	575	23,000	23%
Contra Costa Cty.	515	20,600	20%
Sonoma Cty.	500	20,000	19%
Oakland Area	495	19,800	19%
Solano Cty.	395	15,800	13%

* 10th percentile advertised rent

Source: Bay Area Council; Urban Decision Systems

From Bay Area Council, 1989

develop Hamilton Field and Walnut Creek voters rejected a measure to revise the city's growth control--both proposals that stemmed from the local planning process. The very day of the election, a poll reported that six out of every ten Californians oppose limits on job development, yet an actual majority oppose the population growth that inevitably follows (Bay Area Council 1989b, 1). If this gets reflected in every local vote, the result is a built-in contradiction. Worse, since the biggest resistance comes from the counties where pressures are greatest--like those around the edge of the nine-county area --those pressures will get squeezed farther out down the freeway; hence that explosive growth of the outer ring of counties.

Why worse? Simply, because it is bound to increase the commute burden and to exacerbate the already parlous traffic problem. By and large, the new jobs are being created in clusters, especially in a few selected locations around the periphery of the nine-county area (the I-680 Corridor, the Santa Clara Valley south of San Jose) or in one or two urban cores in the eleven-county outer ring (Sacramento, Stockton, Santa-Cruz/Watsonville). The new homes, in contrast, are being scattered over the face of the 20-county extended area. The result must be a big increase in both radial and cross-commuting, much of it on Interstate Highways that were never planned for this kind of burden. Suburban gridlock will be followed, before long, by exurban gridlock.

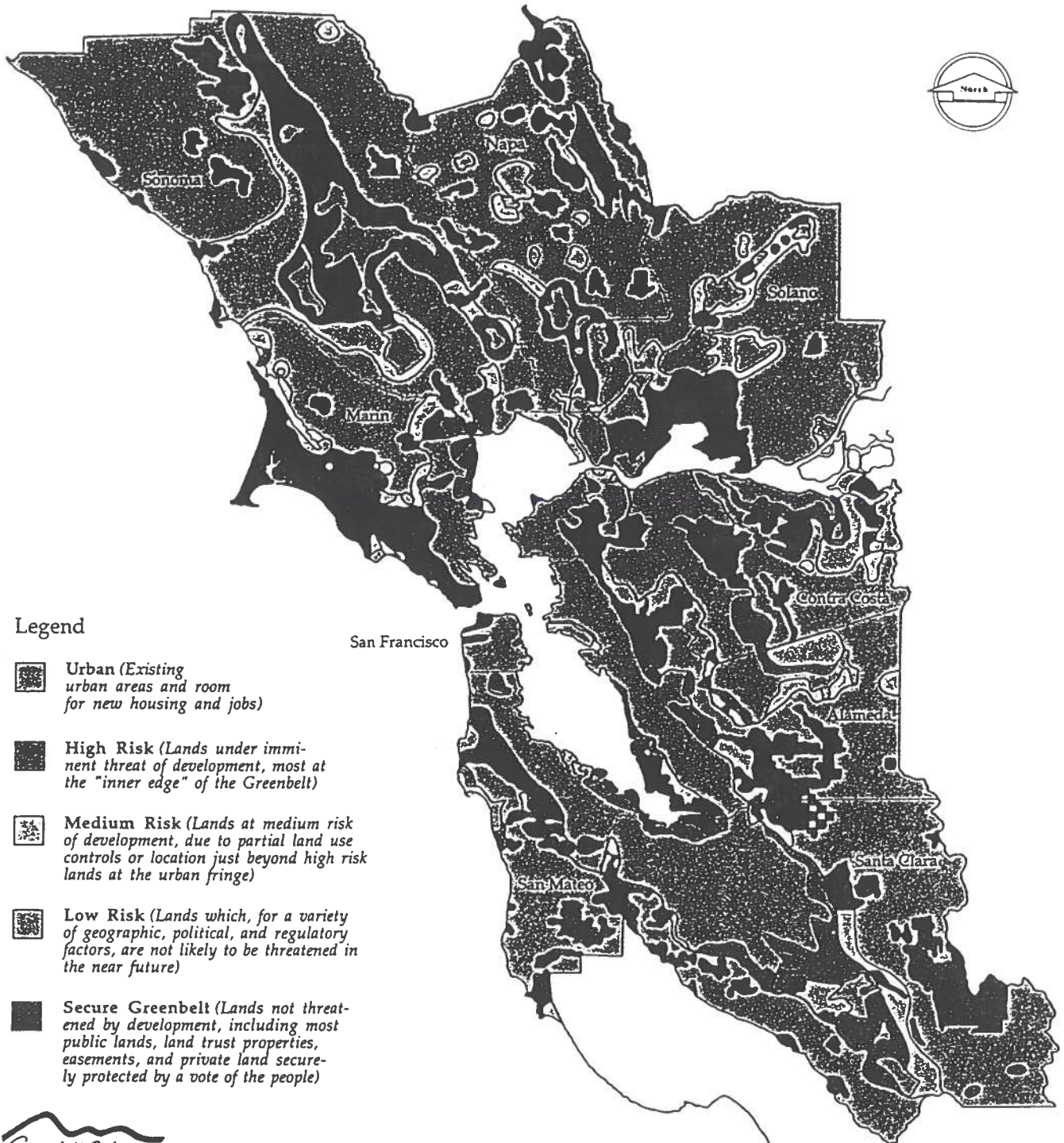
But that is not all. As urban growth seeps into the outer ring, it starts to wash over the state's richest, most productive agricultural land--in the Central Valley, and in the Watsonville-Salinas belt. Of course, there is undoubtedly an argument that some of this land is very expensively cultivated with the aid of subsidized water. Be that as it may, it is an important source of California's wealth as well as a vital resource for the nation. Unless policies can be devised to the contrary, there seems no doubt that the market

forces will prevail: orchards and vineyards will prove less profitable than a crop of tract homes. This then, arguably, is a classic case of the clash between market forces and the wider public interest.

There is yet a third argument, eloquently put in recent reports by the Greenbelt Alliance (Greenbelt Alliance 1989a, 1989b). It is that this pattern of sprawl not only multiplies commute journeys and traffic problems; it also erodes the region's magnificent natural setting of ocean and mountains--which was what made it so attractive to residents and employers in the first place --and it increases air and water pollution. Farmland has declined between 1982 and 1988 by no less than 131,000 acres, and in all by one million acres--about one quarter of the entire nine-county area--over the forty years 1949-89 (Greenbelt Alliance 1989a, A-3). And, the Greenbelt Alliance estimates, some 650,000 acres are now at high and medium risk--an area which, if developed, would double the built-up area within the nine-county region (Greenbelt Alliance 1989b, n.p.). Thus, sprawl is something that no one really wants, no one really enjoys, but no one can prevent.

The Alliance is campaigning actively to maintain the whole of the region's 3.8 million remaining green acres as a permanent greenbelt. It aims to raise \$3.5 million over five years for that purpose. And it has been highly successful in the past--as witness the protection of the rich dairylands of West Marin and of the Napa Valley vineyards by strong general plans, the citizen initiatives to safeguard much of Solano county and the San Mateo coastline, and the purchase of huge tracts of public parkland in the East Bay, South Bay, Marin and the Peninsula (Greenbelt Alliance 1989b, n.p.)

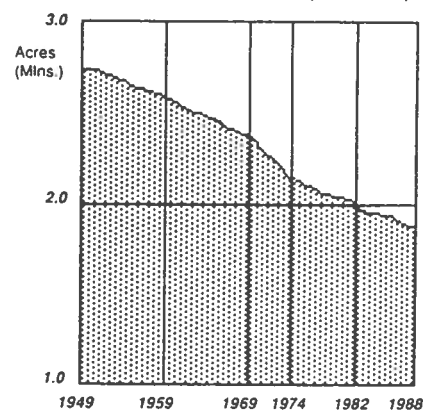
So: everyone must applaud. Clearly, the Alliance is on the side of the angels. But there is a problem: this approach gives no serious suggestion as to where the additional people are to be housed. The Alliance blueprint for a



Greenbelt Alliance
 San Francisco, California
 November 1988

Scale in miles 0 5 10 20

Bay Area Farmland Loss (1949-88)



(Sources: U.S. Census of Agriculture, Greenbelt Alliance)

From Greenbelt Alliance, Campaign 1989

From Greenbelt Alliance, Reviving the Sustainable Metropolis, 1989

"Sustainable Metropolis" calls for permanent greenbelt limits to be accompanied by plans to concentrate jobs in stronger metropolitan employment centers and subcenters, and by "Efficient Land Use," which means "zoning for a general increase in residential densities, recycling underused areas, and identifying and developing open areas not suitable for open space" (Greenbelt Alliance 1989a, 15).

In other words, though the report is ambiguous on this critical point, it seems to call for the whole of the future regional growth to be crammed within the existing urban envelope. No major metropolitan area has ever succeeded in doing such a thing--not even Moscow under the totalitarian dictatorship of Joseph Stalin (Hall 1984, Chapter 4). The London region, which the Alliance quotes approvingly for its strong greenbelt policies, currently plans to house only one-third of its growth within the envelope; the rest will have to be housed on green-field sites (Hall 1989, 98-9). What the Alliance seems to be proposing, then, is simply not practicable or realistic. At least, no one has ever made it work--not even in societies with much more stringent controls, and much less belief in market mechanisms, than this one.

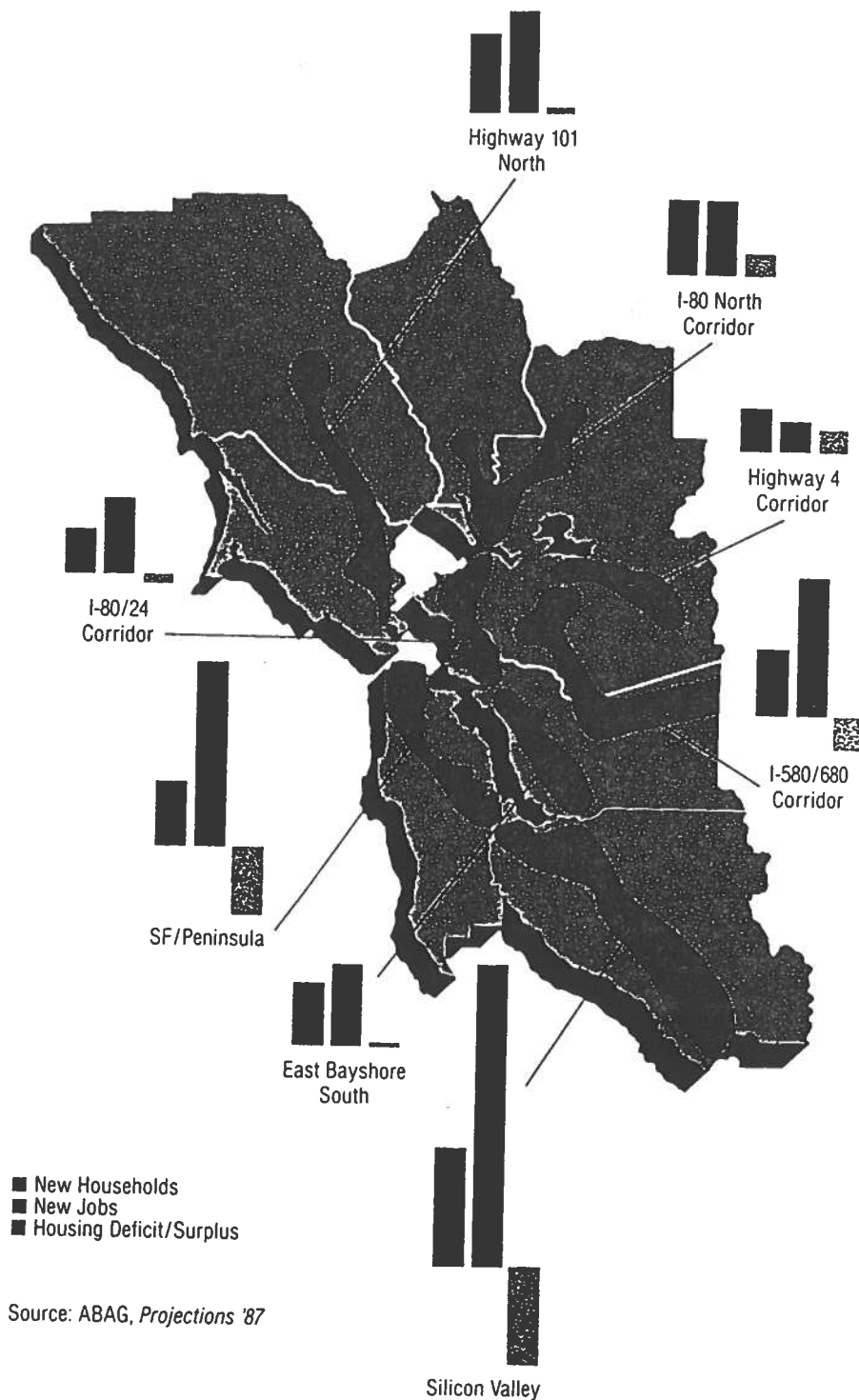
The risk, as David Dowall eloquently argued in his book The Suburban Squeeze (Dowall 1984), is that tight controls on development will simply drive up land and housing costs, and in the process make windfall capital gains for the lucky people who happen to own the remaining developable land (on which, thanks to the President and the Congress, they will enjoy a tax bonus). It is fair to say, of course, that not all agree with Dowall's analysis or with his solution, which is to open up more land. But few can believe that draconian restrictions on new development would do anything to help the present problem of housing affordability.

Where does this academic debate--ironically, one which has been conducted by colleagues within Berkeley's Department of City and Regional Planning--leave us, the citizens of the Bay Area? In a quandary--but one perhaps capable of resolution. The Alliance's own careful mapping of the region's land uses shows that within the nine-county region--their analysis goes no further--the major areas most heavily at risk are on the 101 corridor in Sonoma County; around Novato in Solano County; in Pittsburg and Antioch in Contra Costa County; and at the southern end of the Santa Clara Valley. Some of this land is undoubtedly worth preserving; part, almost certainly, much less so. The important question is to determine which.

In one of these high-risk areas, Santa Clara County, we have the benefit of a detailed local assessment (Santa Clara County 1987). It proposes a compact pattern of urban growth around existing centers, and sets out a sensible combination of General Plan amendments, Zoning Ordinance and other regulatory revisions, plus land acquisition programs (ibid., iii). It sets out no less than 61 areas for possible acquisition and arrays them in order of priority (ibid., IV-12); they range in size from the 16,500 acres of the Bay Area edge to small sites of only a few thousand acres, and in character from wetlands, through valley floors and foothills, to steep and heavily wooded mountains (ibid., IV-13-IV-22). Needless to say, many are high-risk areas as defined by the Greenbelt Alliance. The report recommends a ballot initiative in order to obtain new tax powers for these acquisitions.

Generally, if greenbelt is to be preserved, the best way will be the one proposed by Santa Clara: public or other authorities should buy it. Otherwise, zoning provisions may always be challenged in the courts, as was happening in Fall 1989 in West Marin. Admitted, in some places--as in Santa Cruz ever since 1978--a growth management program has succeeded in its joint objec-

Figure 8
The Future Jobs/Housing Picture
in Key Growth Areas
1985-2005



From Bay Area Council, Making Sense of the Region's Growth, 1988

tives of stemming sprawl and guaranteeing a supply of affordable housing; but even here, developers have spent large sums trying to get recalls (Schiffrin 1984, *passim*), and may always succeed.

In any event, preserving greenbelt only makes complete sense as part of an overall planning process that connects living, working, and recreation. That is the central topic to which we return in Chapter 6. Meanwhile, we need to look more closely at the critical element that joins jobs and homes--the Bay Area's transportation system.

5. TOWARD UNIVERSAL GRIDLOCK

For many Bay Area residents, in the late 1980s, simply getting around has come to seem a virtual nightmare. For six years in a row, they have told pollsters that traffic congestion is their worst problem; in 1988, 37 percent said so (Bernick 1989, 26; Viviano 1989c, 13). And small wonder: freeways which had ample capacity a few years back now are now super-saturated. Even before the commuting nightmares that followed the Loma Prieto earthquake, over the twenty years 1966-86, I-880 in South Oakland were from 71 to 130 percent of capacity, I-80 in the northern part of the East Bay from 67 to 114 percent (Bernick 1989, 26).

The simple reason is that traffic growth has overrun highway capacity: while vehicle miles traveled in California rose 163 percent between 1964 and 1987, State highway mileage rose only 32 percent (California Assembly 1988, 6). In the Bay Area, since 1980 the number of autos has risen 200,000, auto miles have increased by 33 percent; and 250 miles of highway are congested, compared with 166 miles in 1982; congestion rose 25 percent between 1982 and 1984 alone (Viviano 1989c, 13; California Assembly 1988, 5). Projections show a need for an additional 14 lanes on the I-80 Carquinez Bridge and 10 additional lanes on the Bay Bridge to get to San Francisco at current speeds by 2004; and even worse increases in congestion will occur on suburban freeways, where delays will increase on average by 8.9 percent per year or 433 percent over 1985-2005 (California Assembly 1988, 5).

How did it happen? A number of factors have reacted one on the other. As well as growth in population, they include increasing labor force participation; increased auto ownership per household [now 0.8, with 20 percent of Bay Area households recording more cars than licensed drivers]; increased leisure time; suburbanization, which means that nation-wide suburb-to-suburb commutes

now dominate with 40 percent of the total; economic growth associated with the Bay Area's position on the Pacific Rim; and the growth of the service sector (California Assembly 1988, 7-8). But more than anything, the growing gridlock represents the failure of a dream: the dream of total automobility, which California has been cherishing almost as long as the automobile existed.

In transportation terms, as the first-time visitor soon realizes, the Bay Area represents a paradox. On the freeway from the airport, driving eight- or ten-lane freeways, looping through the multi-level interchanges, there can be no doubt that this is that archetypal Californian dream. Yet, once inside San Francisco, almost every tourist immediately notices that this is the most European of major North American cities: here, supported by a dense and compact urban form, public transportation really works.

The visitor is right both times. The Bay Area is effectively two kinds of city; the problem is that one has effectively outgrown and smothered the other.

The first kind of city is the one that grew up around the streetcar, and later the bus and the BART. It is a very traditional kind of city, which depends on strong downtowns and close-knit residential suburbs linked by radial mass transit. The city of San Francisco, product of O'Shaughnessy's great Municipal Railway, is its most perfect expression. Older parts of the East Bay cities, developed around the lines of the Key System and the Southern Pacific's Red Cars, also illustrate it. But, effectively since the late 1920s, the Bay Area has not grown around transit at all; it has spread around the private automobile. Transit patronage both in the city and in the East Bay peaked in the mid-1920s; at the start of World War II, more than 80 percent of Bay Area industrial workers commuted by car (Adler 1980, 9, 59, 91).

After the war, the freeway network was progressively laid over the old system of arterials, sometimes upgrading it, generally parallelling it. The

resulting system was essentially a grid of strong north-south corridors following the two shores of the Bay, connected by trans-Bay bridges; later north-south additions produced a two-strand structure on the Peninsula and a three-strand structure in the East Bay, again joined by short east-west connectors through the hills. Logically, these two systems should have focussed on the San Francisco and Oakland downtowns, as both Chambers of Commerce intended. But the freeway revolt in the neighborhoods--a revolt which took both transportation engineers and business interests by surprise--cut the heart out of the San Francisco system between 1959 and 1965, leaving an effective hole in the middle (Lathrop 1971, *passim*; Adler 1980, 308-316).

The result is a system that--as in many European metropolitan areas--is transit-dependent at its core but is auto-dependent almost everywhere else. Though only 6 percent of Californians commute by transit, in San Francisco the figure is 50 percent of peak trips (California Assembly 1988, 9); of downtown workers, only 10 percent arrive as solo automobile riders, a proportion similar to New York, London, or Paris (Metropolitan Transportation Commission 1989, 5).

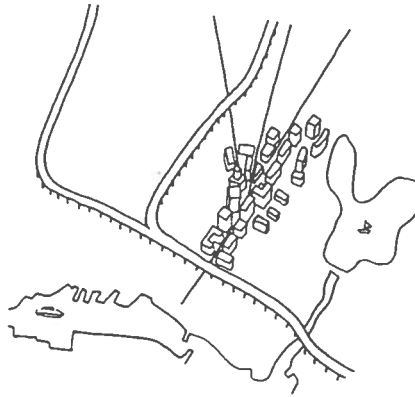
But in most of the region, the proportions are reversed. The fact is that many commuter journeys could hardly be made by transit at all: they connect dispersed workplaces and dispersed residential areas. The Bay Area's third metropolitan core, the only one essentially developed after World War II, is quite different from the other two: though San Jose's population has now topped San Francisco's, its downtown employs only 30,000 against the older city's 270,000 or Oakland's 52,000; only 23 percent use transit, against San Francisco's 70 and Oakland's 51 (Greenbelt Alliance 1989, 6). Outside the cores, the position is even more extreme: as against a density of 397 workers to every acre in the San Francisco downtown, the new Bishop Ranch office complex in San Ramon has a density of 21, Hacienda Business Park in Pleasanton less than 12 (*ibid.*,

CENTRAL BUSINESS DISTRICT PROFILES



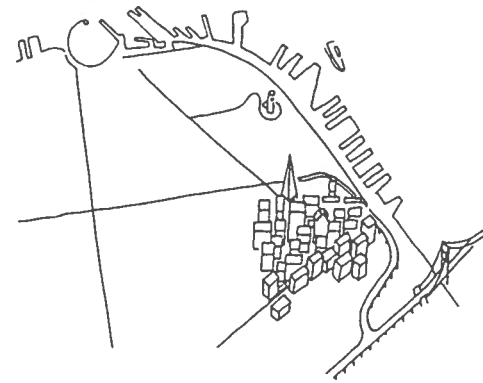
SAN JOSE

Land Area (acres):	493
Employees:	30,000
Employees/Acre:	61
Transit Use (by commuters):	22.8%



OAKLAND

Land Area (acres):	384
Employees:	52,000
Employees/Acre:	135
Transit Use (by commuters):	51%



SAN FRANCISCO

Land Area (acres):	680
Employees:	270,000
Employees/Acre:	397
Transit Use (by commuters):	69.7%

(Note: Transit measures are based on 1980 Metropolitan Transportation Commission data and include ride sharing.)

From Greenbelt Alliance, Reviving the Sustainable Metropolis, 1989

5-6). Although the resultant traffic flows are channelled along freeway corridors, the dispersal at both ends makes them singularly unamenable to conventional transit strategies. Even in 1980, only 10 percent of all Bay Area residents commuted by transit, and ridership has been declining since then, despite a big increase in overall numbers of commuters (Bay Area Council 1988, 15).

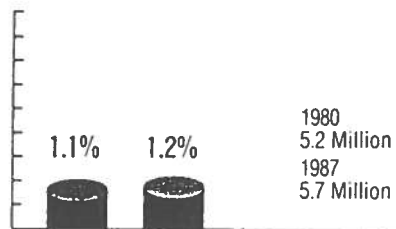
The experience of BART is salutary in this respect: it failed to attract the predicted riders. August 1989 saw BART ridership reach an all-time pre-earthquake peak of 219,000 passengers a day, but even this was far below the 258,600 figure for which the system was planned. (Traffic after October 17 rose as high as 350,000, and since then has remained well up, at around 290,000. But this may reflect continuing traffic chaos due to freeway closures in San Francisco.) The reason is that even on the densest radial corridors, potential passengers need to drive to the station and to transfer there; and this outweighs the relatively rapid line haul once on board the train (Webber 1976, 30, 33). And these densest corridors are not very dense: the tradition has been to zone future development at an average of less than six units per acre (Bay Area Council 1988, 15), and the attempt to develop high-density residential enclaves around BART stations has proved a failure (ibid., 16). The fact, which the BART planners ignored (Hall 1982b, 133), is that Californians do not want to live like Parisians.

The same conclusion would apply even more forcefully to any extension of the BART system, especially to orbital or circumferential links--for instance, following the I-680 corridor--that were part of the original BART plan. Any system that is to compete with the private auto has got to replicate the auto's essential characteristics: it must pick up close to people's front doors and get them, directly and in reasonable comfort, to where they want to go. Even with freeways travelling at 10 or 20 miles an hour, the car does this better

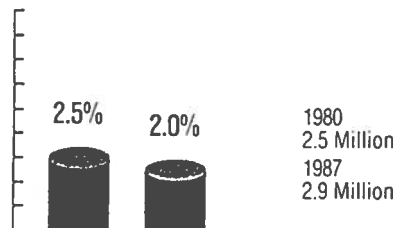
Figure 2
Annual Growth Rates:
How Transportation Compares

■ 1970-1980 ■ 1980-1987

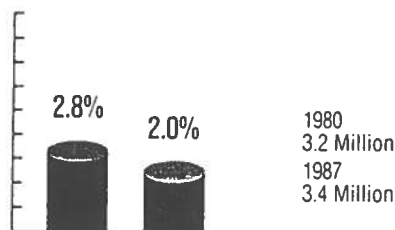
Population



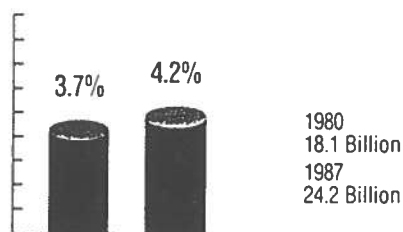
Employment



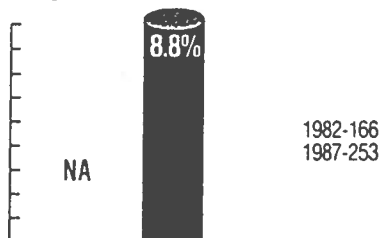
Automobiles



Highway Vehicle Miles Traveled



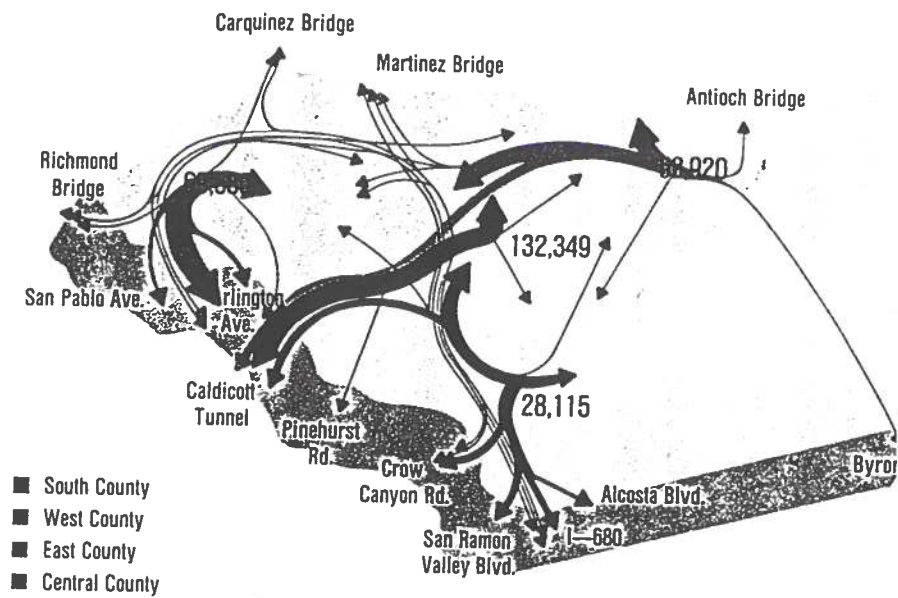
Miles of Congestion



Sources: State Dept. of Finance,
Employment Development Dept., CalTrans

From Bay Area Council, Making Sense of the Region's Growth, 1988

Figure 6
1980 Commute Patterns
Contra Costa County Residents
(Volume of Home-Based Trips by Area)

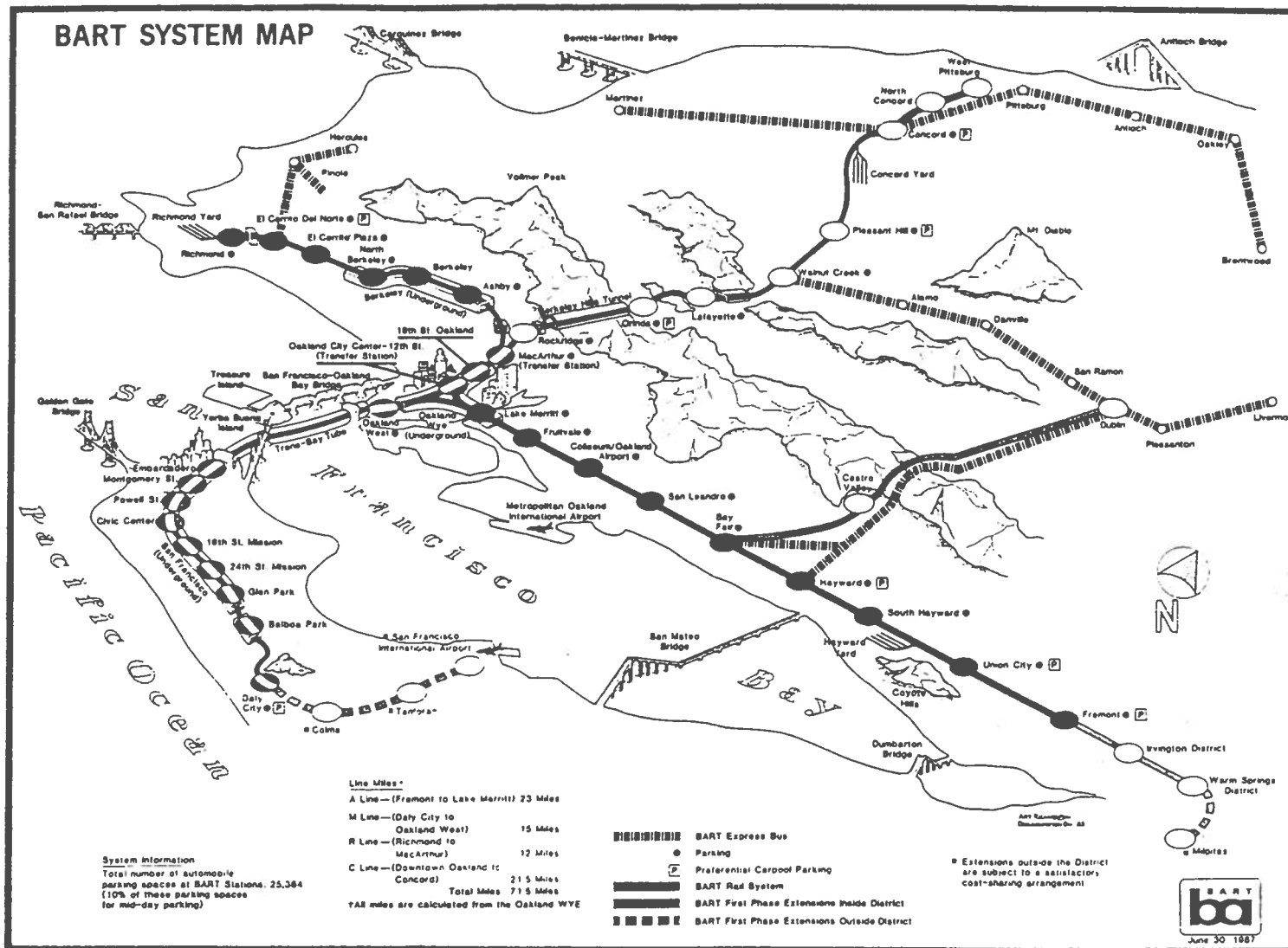


Source: 1980 Census
From Bay Area Council, Making Sense of the Region's Growth, 1988

than the competition. And buses, vans, and other forms of para-transit are like as not stuck in the same jams, so they gain no advantage.

Yet the traditional Californian remedy--pouring concrete to accommodate the extra auto commuters--is just not going to work either, at least as it did in the past (California Assembly 1988, 8-9). True, extra lanes can and must be laid on some corridors, and even new freeways in one or two places; yet they bring only temporary relief, because they attract new development which generates yet further traffic. So the situation which Bob Cervero has so aptly labelled Suburban Gridlock (Cervero 1985) is not amenable to conventional treatments at all: it arises out of an inbuilt contradiction, which no one properly appreciated or anticipated until the 1980s, between the transportation demands of a dispersed pattern of living and working, and the capacity of the overall transportation infrastructure to support those demands. In the buoyant 1960s and in the sober resource-constrained 1970s, even the experts thought that overall the system would cope; in the latter decade, they thought that the resource constraints would prove the problem. But in the late 1980s, it is clear that it cannot--at least, at any remotely satisfactory level of performance. The paradox is that the highway system has proved incapable of it.

What then do we do? Since 1986 voters in Alameda, San Mateo, and Contra Costa have given their view: they have all voted 1/2-cent hikes in sales taxes to support transit, with the result that in 1988, BART started work on four major expansions, to West Pittsburg (cost: \$425 million), San Francisco Airport (\$590 million), Pleasanton (\$232 million) and Warm Springs (\$370 million). In cost-per-mile terms they vary from only \$18 million for Pleasanton to \$83 million for SFO (Bernick 1989, 26). But apart from the first-named, which is special, these extensions will essentially bring some more long-distance commuters to the Oakland and San Francisco downtowns--especially the latter. They



SOURCE: BART

will make barely any perceptible difference to the problems of most regular suburb-to-suburb travelers--who just happen to represent most of the people who voted for them.

The way we should go, the experts say, is through what they call Commute Alternatives (CA) or Transportation Management Systems (TMS). They include a very wide spread of strategies, mainly designed to persuade commuters that it is in their own best interest to explore ways of riding that use roadspace more effectively. Among the most promising are:

1. Mandatory work schedules for public agencies to avoid the peaks. In Los Angeles during the 1984 Olympics, despite traffic volumes that rose 5 percent, taking 7 percent of journeys off the peak reduced congestion 60 percent (California Assembly 1988, 10).

2. Satellite work stations and telecommuting. A SCAG study indicates that if 1 in 8 worked this way, congested vehicle miles could drop 32 percent (California Assembly 1988, 11).

3. High-Occupancy Vehicle networks. To improve I-80, Caltrans is already starting work on an additional HOV lane with an estimated daily ridership of 20,000 by the year 2005, at a cost of \$250 million, but it will not increase capacity on the Bay Bridge (Bernick 1989, 25); the problem is that the various schemes do not tie together into a regional network (California Assembly 1988, 11). HOV lanes in Santa Clara County have cut HOV commute times by up to 50 percent and 10 percent or more for others (California Assembly 1988, 11).

4. Improved parking management, especially by public agencies, as in downtown San Francisco (California Assembly 1988, 12).

5. Mixed living-and-working developments (California Assembly 1988, 12).

6. Improved highway technologies such as the Automated Freeway and the Smart Corridor (California Assembly 1988, 13-14). California is the lead state

but European and Japanese technologies are years ahead (California Assembly 1988, 12).

PATH (Program on Advanced Technology for the Highway), a research program in progress at Berkeley's Institute of Transportation Studies, would eventually allow an automated highway--but this is probably 30-40 years off, according to Adib Kanafani (Viviano 1989c, 13). An interim stage is reducing headways via radar and other devices, plus lateral guidance, with electric vehicles and "smart streets" [intelligent systems] (Viviano 1989c, 13). But there is a severe lack of funds for major research (Viviano 1989c, 14). And there is not the political will to do something about it; people accept the deterioration in conditions (Viviano 1989c, 14).

7. Improvements in mass transit by imaginative policies adapted to the realities of the suburb-to-suburb commute, such as smaller buses and para-transit. Currently only 5 percent of transit vehicles have 19 places or less. Shuttle buses, at both the residence and workplace ends of the trip, could be "hubbed" through transit mini-centers, as in Edmonton, Denver, Portland, and Vancouver, where ridership has increased 50-200 percent. Also, advanced technology such as guideway buses, vehicle information systems, and innovative fare collection could be used (California Assembly 1988, 16-17).

8. Employment of a transportation coordinator at work, providing information, organizing car-pooling and van-pooling, and providing preferential parking at the workplace for poolers, while reducing conventional parking.

Encouragingly, in February 1990 the Bay Area Economic Forum threw its prestige behind a radical auto-limitation strategy based on tolls on new and congested highways, phasing-out of free parking and replacement by employee transit allowances, and a region-wide network of carpool lanes. But the problem until now is a diversity of short-term approaches and of funding sources.

California has had no long-term integrated strategy. Currently 61 percent of Caltrans budget is for highway construction and 17 percent for maintenance. Transit agencies are too small and overlapping (California Assembly 1988, 34-38). But the state highway program has a projected shortfall of \$1.4 billion, while a Caltrans survey of 1984 indicated that even \$13 billion would not stave off deterioration of performance (California Assembly 1988, 45).

The state should give a lead to other public agencies, which together can develop the appropriate strategies. Caltrans itself can build extra freeway capacity in the form of HOVs, as planned for Highway 101 in the North Bay and I-80 in the East Bay; it may even build some such routes on old right-of-way, as on the 101 corridor in Marin and Sonoma Counties. The Metropolitan Transportation Commission can support ride-sharing schemes or shuttle bus systems. Cities could use pricing policies to restrict provision of all-day commuter parking. More radically, the state could introduce road pricing at congested periods, either on the most congested stretches (for instance, the Bay Bridge) or more generally (Metropolitan Transportation Commission 1989). There is a strong case for a system of charging that relates more closely to the cost of providing the service, in the form of electronic road pricing, supplementary licensing to enter congested employment centers (as Singapore has successfully employed since 1975), or toll roads (California Assembly 1988, 47-48). Air rights over freeways could be sold, a concept known as "lidding," as in Seattle, and the proceeds used for investments in innovative solutions (California Assembly 1988, 49). The state should encourage transit authorities to unify in order to develop better-integrated commute services based on the notion of hubbing.

Yet all this ignores the fact that meanwhile, the underlying situation is likely to get worse. The reason is the worsening mismatch between homes and

jobs, already 'underlined in Chapters 3 and 4. Projections by ABAG, the Association of Bay Area Governments, suggest that jobs will continue to deconcentrate--especially to Silicon Valley, the Tri-Valley area, Southern Alameda County, and the North Bay, while housing provision will continue to fall short of the projected need by at least 60,000 units over the 1990-2005 period alone (Bay Area Council 1988, 21). And much of the land zoned for housing is in Solano and Sonoma Counties, while the big job growth will be at the region's southern end. We come right back to the central problem: employment policies, housing policies, greenbelt policies, transportation policies are ineffective in isolation. They must be brought together.

6. GETTING IT TOGETHER

The Bay Area could continue to grow as it has grown. But if it does, everyone should receive due warning--preferably with the property tax demand --that the result will be more, exponentially more, of our present discontents. And more even than that: the real risk is that if the region fails to put its house in order, the very qualities that have made it great--its superb natural environment, its civilized quality of life, its vibrant economy--could erode away. If the area fails to educate its future workforce, if it succumbs to traffic paralysis, if its housing ceases to be affordable save for millionaires, if it fouls its nest, then people, and above all jobs, will leave. The area's economy and its lifestyle are much more precarious than many think.

It is time for action. And it must be collective action. The central problem of the Bay Area is the one in Yeats' poem: Things fall apart, the Center cannot hold. But we are not sailing to Byzantium: we could be sailing toward a kind of Pacific Niagara.

The problem, put it another way, is the same as in the classic fable of the Tragedy of the Commons. In the Middle Ages, people cultivated their open fields in common; their cattle and sheep grazed the same fallow and pasture. But it was in no one's interest to regulate the process. When one peasant got the notion that he could cheat by acquiring more stock, everyone did so. Pretty soon, the grass was all gone. But no one could act in the interest of all. That is exactly the tragedy of the Bay Area today: each group, each locality, acts in its own interest, ignoring that the result will threaten the welfare of us all.

What we need, then, is a set of policies that will guarantee for all of us the qualities we all want for ourselves, but can only find collectively.

What are those qualities? It's not difficult to make a list: the opinion polls provide it. A well-paid, satisfying job. A decent, affordable home. Good schools for our children. Easy access to open space and ocean. A tolerable journey to work, and to anything else. Safety on the streets. Clean air and water, and no threat of sudden disaster from lurking hazards.

No one policy will guarantee those things: only a combination of them will. And not all of them can be adequately discussed in this short paper. What is important to understand is that a number of them fit together. In particular, jobs and homes and transportation require planning that goes beyond the limits of individual cities or counties. The central task of this planning should be to provide adequate space for the offices and laboratories and factories that will provide the essential economic growth of the region, within easy reach of affordable housing, in such a way that the region's natural qualities are not merely maintained but are enhanced. In 1989, that sounds almost like a search for the Holy Grail or the Philosopher's Stone. But it can be done.

The reason for thinking that is that other major metropolitan areas have done it. It would be foolish and plain wrong to say that any of these areas have solved all their problems. But they have found solutions that could apply here too.

London. Over forty years ago, London put a green belt around itself in order to stop its further growth. As a matter of fact, the Bay Area's green belt bears more than a passing resemblance to London's. But London went much further: the counties around it also limited their growth, compacting it into suburban rings around the existing towns (Hall 1984, Chapter 2). The government provided the necessary infrastructure to build eleven new towns and to make massive expansions to a score of others, some as close as 25 miles away, others 70 miles and more distant. As a result, London has grown as a vast polycentric

city region, which now stretches up to 100 miles from the Bank of England and Piccadilly Circus. But there is no sprawl: seen from the air, which is the way visiting Californians first see it, it appears green. In the classic phrase of Raymond Unwin, the great British planner who ended his career teaching at Columbia University, the pattern is towns against a background of open country. That means that most people have plenty of jobs close by, within three or four miles. They have open countryside close by, too.

The British have not solved all their problems. Housing affordability is a big issue there too, as prices have rocketed. (But--a portent perhaps for California--throughout 1989 they have been sinking.) Congestion on the freeways, above all the M25 beltway, has become a major media issue; the British government has announced that it will double the highways program forthwith. NIMBYism is one Californian phrase that has been successfully exported to South East England, as local communities resist developers' proposals for new communities. There are plenty of uncomfortable parallels between the two areas.

But there is this difference: the county planning authorities voluntarily and enthusiastically cooperate in a regional planning association--SERPLAN, the London and South East Regional Planning Committee--which collectively hammers out a strategy for the entire area. That strategy then has to be approved by the Secretary of State for the Environment, the British equivalent of the Secretary of HUD. (The whole of Britain, remember, would fit into California with some space left over; here, Sacramento and not Washington would be the appropriate point of coordination.) That way, every municipality understands how it fits into the wider regional picture.

Stockholm. At almost the same time as the British were drawing up their plans for London, a much smaller city, Sweden's capital, was doing the same (Hall 1982a, 230-4). It pursued a different strategy: instead of a green

belt, green and blue wedges following forest and water areas; instead of self-contained new towns, satellites connected by a new transit system. The plan served Stockholm well for over twenty years; in the 1960s, when time came to update it, they settled for a larger version of the same thing. Not only did the plan provide a framework to create a uniquely attractive lifestyle; it also provided a rational basis for firms to make their own investment decisions. Offices, factories, laboratories, and shops could be built within easy reach of their workforces. No wonder that Swedish firms have continued to be highly successful in international competition, and that the Swedish economy was outstanding in its rapid structural adaptation and quick recovery from the recession of the early 1980s.

Again, there have been complaints and disagreements. Like London's original new towns, Stockholm's suburbs were built by public and cooperative agencies, as the equivalent of project housing. It just happened that in Stockholm, everyone, from the Prime Minister to the janitor, was happy to live in them. But, over the years, people turned against collective apartment living. Just as around London, Stockholmers now prefer to buy their own single-family homes, American-style. But that does not prevent them being organized into compact units with good access to transit as well as freeways. Swedish home-buyers, and Swedish home-builders, both recognize that this is the best way.

Paris. Nearly a quarter-century ago, Charles de Gaulle's team drew up a hugely ambitious master plan for the Paris region, a metropolitan area that today has almost double the Bay Area's population. Eight huge new cities--later cut back to five--would be built in two development corridors, one north and one south of the historic city. They would contain both new homes and new jobs. They would be hooked together by new freeways and by a totally new express

transit network, the RER (Regional Express Rail), a system very like BART. It was vastly ambitious and astronomically expensive (Hall 1984, Chapter 3).

But, amazingly, though it was scaled down, it did get built. There were disagreements and criticisms, as there are bound to be: some of the architecture was and is very gimmicky, some of the new towns are somewhat lacking in soul (but so are new suburbs everywhere), at least one line on the RER is becoming overcrowded. But overall, almost everyone is pleased with the result --not least, private enterprise, which finds good places to locate close to a skilled and educated workforce. Paris today is one of the most attractive urban areas in Europe, well placed to become one of the major centers of the new frontierless Europe post-1992.

Now, they are revising the plan; the new version will emerge in 1990, the 25th anniversary of the old one. Preliminary drafts show that it is equally audacious, with huge development poles to create major European job magnets: one around the Charles de Gaulle airport, another around the new European Disneyland, a third around the Science City to the south of Paris. All three will be linked by a new branch of the TGV, the High-Speed Train, which by 1993 will connect London and Brussels to the north with Lyons and Marseilles to the south. The French planners are quite clear about their strategy: it is to create the right conditions to make Paris the major commercial and high-tech center of the new Europe. And the kinds of activities they hope to attract, increasingly, are ones that are footloose: they can go anywhere. In the new global economy, places like the Bay Area compete with places like Paris. We neglect that at our peril.

If London and Paris and Stockholm can do it, why cannot the Bay Area? It is not that our social preferences or our economic systems are so very different from theirs. As just said, large transnational corporations behave in much

the same ways everywhere; so do small businesses. All over the western world, people display astonishingly similar housing and environmental preferences. The difference lies first in the Californian system of government; and secondly in that elusive set of qualities, the soul of the place, which we tried to capture in Chapter 2.

Californian local government, indeed American local government in general, is based on the principle that local means local. The freedom to incorporate has meant a multiplicity of cities, many of them very small, and special purpose agencies: nine counties, 97 municipalities, 108 different tax districts, 24 different and unrelated transit systems. So complex is the resulting mosaic, that it is difficult even to explain it to a visitor from England, France, or Sweden. Unlike the South East of England, which has a voluntary cooperative planning body, or the Région Ile de France, which has a much stronger regional plan agency, or the Greater Stockholm County Council, the Bay Area has merely ABAG, which acts as a research and discussion center, and nothing at all representing the wider twenty-county region which, if anything, is now the meaningful unit for both analysis and planning.

The Bay Area has tried before to develop such a stronger regional planning body. Five times between 1969 and 1973, Richmond Assemblyman Jack Knox introduced bills to create a Bay Area multi-purpose regional authority; each failed, basically because it proved impossible to find a compromise formula that satisfied all the diverse interests involved (Woo 1975, *passim*). Now, once again, in the words of ABAG executive director Revan Tranter, "People are suddenly willing to discuss the 'R' word again" (Viviano 1989a, A1, A4). Different, even rival, interests--business, environmentalists, planners--are sitting down around the same table to try to thrash out agreement on a planning structure for the region.

The problem, as ever, is that the politicians must answer to their constituents, and they have local axes to grind. One pro-regionalist official, Contra Costa supervisor Tom Powers, described it as the "NIMEY" syndrome, the political equivalent of NIMBYism: "Not in My Election Year" (Viviano 1989b, A1). A poll of local officials, by ABAG in October 1988, confirms this: an overwhelming majority agreed on "a need to significantly improve the level of cooperation and coordination on issues relating to land use and transportation," yet opposed "an agency with the power and expertise to resolve local land use and transportation conflicts" (Viviano 1989b, A4). Case after case illustrates the rule that when it comes to the crunch, each local jurisdiction defends its own narrow interests to the death. Just one notorious example: in Santa Clara County, more than three years after a Golden Triangle Task Force was established to produce a consensus plan for balanced employment, housing, and traffic, the group became deadlocked over highway finance and housing construction rules (Viviano 1989b, A4).

Because of this multiplicity of sorry stories and failed opportunities, some become cynical. The best that we can hope for, they say, is limited agreement at the sub-regional scale: within the Golden Triangle, say, or within the Tri-Valley growth belt along I-580 and I-680. But many of the problems and the conflicts go way beyond such limits, to encompass virtually the entire region. Commuters who must travel from distant Vallejo to San Francisco, or from Gilroy to work in Walnut Creek, and who want to avoid the gridlocked freeways, would need to change between several different transit districts; their basic problems could be resolved only by agreement region-wide.

What would such agreement involve? First, a broad land use plan for commercial and industrial development, housing, open space and transportation. Local attitudes to these four elements differ radically. Because the commer-

cial and industrial growth is such a vital source of tax revenue, and because localities will not relinquish it, such zoning would need to be generous--much more generous than regional projections would suggest, thus giving municipalities a chance to compete with each other for what they regard as the glittering prizes. Because new housing in contrast is not liked, it would need to be done on a share-the-misery basis, and it might well involve a new source of revenue --on which, see Chapter 7. Because open space will almost certainly entail big land purchases, it will once again mean creative financing. Because the transportation component will mean huge public investments, it will have to hang on subsidies from higher levels, whether state or federal; and it will mean at least cooperation between transit districts if not their actual merger, which may not be popular.

It is not too difficult to see the outlines of a Bay Area 2010 or 2020, which might arise from such a set of policies. It would involve a cluster of compact and partly self-contained cities, of different sizes, each of which combined housing with a wide range of job opportunities. Such places could never hope to be completely self-contained, but they could aspire to a much greater degree of self-containment than most places in today's Bay Area. For the in- and out-commuters, there would be some increases in highway capacity, perhaps some long-distance extensions of BART (or even a high-speed train service connecting Oakland, Sacramento, and Stockton), but above all a wide variety of imaginative transportation systems management options. The cities would be arrayed mainly along high-density transportation corridors which offered all or most of these commuting choices. Between the cities would be wide green belts--narrower, perhaps, along the corridors, wider between them--so that, far from merging into continuous suburban and exurban sprawl, the region would truly consist of Towns Against a Background of Open Country.

It is an inspiring vision. And it is almost certainly what most citizens would like and would actively vote for, given the choice. The problem is not wanting it, but getting it. There is a need both for research and for education. Research, to understand better the nature of conflict within and between local interests in a complex urban region such as this, and thus how to resolve it. Education, to work patiently to demonstrate to the warring interest groups how even their narrow interests could better be served by cooperation. Jaw-Jaw, in Winston Churchill's immortal words, is better than War-War. That is the message that needs to be developed and argued.

But, before that happens, one basic obstacle to cooperation needs addressing: money.

7. PAYING FOR IT ALL

Even if it proves possible to go back to the regional drawing board, the fact is that the world of 1989 is very different from the world of 1973. The most important intervening variable is of course the passage in 1978 of Proposition 13, which slashed local government tax revenues almost in half (Bay Area Council 1988b, 7). Though its effects were for a long time muted, increasingly they have placed local public spending in California in a progressively-tightening vice-like grip. Much of the quality of private affluence and public squalor, so evident in California in the late 1980s, can be ascribed to that factor alone.

But Proposition 13 has had equally important indirect effects. Local governments, faced with the dilemma of rapidly escalating commitments and inelastic public funds, have reacted by creative financing: they have sought new revenue sources outside the traditional tax system. In particular, they have increasingly resorted to the device of development fees in order to meet the imputed impacts of new development. In the six years 1981-87, total developer fees rose by 126 percent, and the element in those fees that was supposed to meet the costs of growth rose by no less than 324 percent, or 66 percent of the total fee hike; the median overall fee in 1987, \$9,110, may represent as much as 10 percent of the cost of a small new home (Bay Area Council 1988b, 5-6).

The fact is that California local governments are now being ground between two fiscal millstones: their tax revenues are inelastic while, because of the buoyant growth of the 1980s, the demands on infrastructure and basic public services continue to escalate. This dilemma is particularly acute in those counties and cities that are feeling the main impact of growth, such as those at the fringe of the nine-county Bay Area and beyond. Nothing is more natural, in the circumstances, than impact fees. The logic is impeccable:

those who take actions which negatively impact the community--in this case, developers who create additional traffic and demand for school places--should pay those costs in full. There is an implied political logic too: it is that our local community is a desirable club, and that those who wish to join the club--that is, new residents--should pay the full membership fees up-front. Since development fees are passed straight on to the hapless buyer, that undoubtedly is the result.

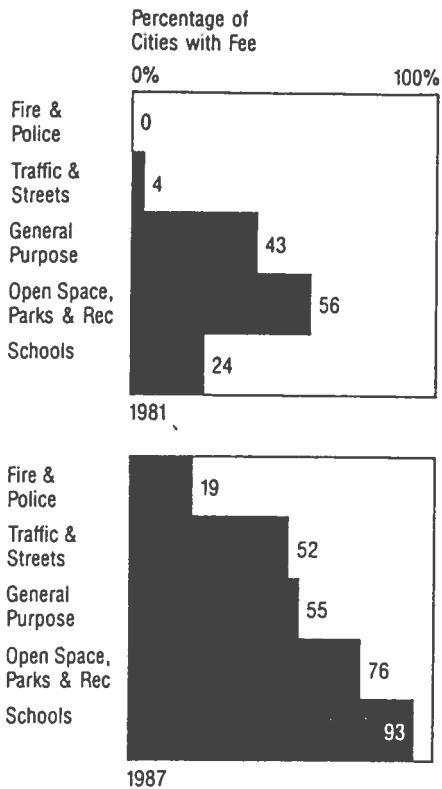
The trouble about this logic is that it ignores equity. Development fees, passed on to buyers, represent a tax by existing residents on new residents--which, applied to the first-time buyers who constitute a big share of those new residents, means a tax of the old on the young and of the better-off on the worse-off. Worse, since fees tend to be charged on a per-unit basis, developers react to the fees by building larger, more expensive homes at lower densities, which further prices out the new buyers and perversely makes local communities even more resistant to further development (Bay Area Council 1988b, 9). Overall, the Bay Area Council calculates, a fee of \$10,000--now the average--means that 100,000 fewer Bay Area households, between 3 and 4 percent of the total, fail to reach the bottom rung of the ownership ladder (ibid., 10, 15). In a comprehensive review of the existing studies on the economic effects of all forms of growth control, many of them in California, Lillydahl and Singell conclude that though they vary greatly,

In unique, rapidly growing metropolitan environments where growth control measures are ubiquitous and where controls may grant monopoly powers to builders, average housing prices may be as much as 35 to 40 percent higher than similar communities without growth control (Lillydahl and Singell 1988, 71).

Their general conclusion is worth extensive quotation:

It is highly unlikely that aggregate housing provision will match needs in an optimal manner when individual political

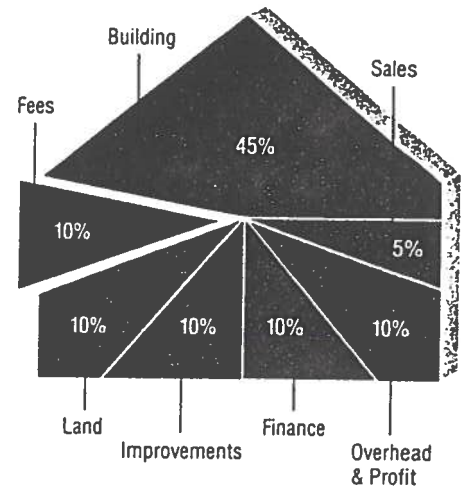
Figure 2
The Increasing Use of Growth Fees



Source: Association of Bay Area Governments
& Bay Area Council

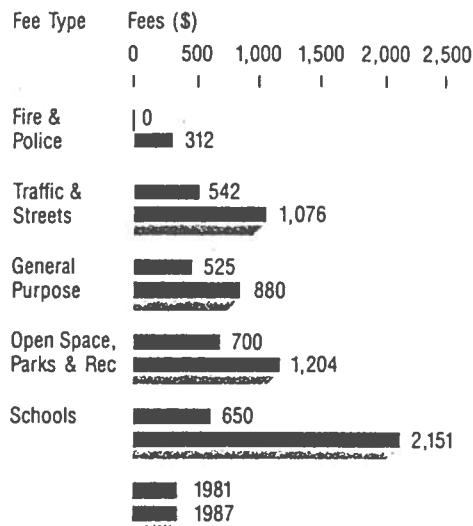
From Bay Area Council,
Taxing the American Dream, 1983

Figure 4
The Cost Components of a Starter Home



Source: Bay Area Council
From Bay Area Council, Taxing the American Dream, 1983

Figure 3
Growth Fees on the Rise



Source: Association of Bay Area Governments
& Bay Area Council

From Bay Area Council, Taxing the American Dream, 1988

subdivisions institute growth controls and when housing construction is the primary source of control . . . While there is a real need for efforts to maintain the quality of local environments, metropolitan areawide governments are still too weak to ensure that such efforts will take cognizance of the benefits and costs to the larger society. All too often, a disproportionate portion of the costs of such programs fall upon the lowest income groups who can least afford them (ibid., 74).

One reason for this conclusion is that however much communities try to mitigate the effects of growth controls by provision for low-income housing, the usual reaction of developers is to concentrate on higher-cost, lower-density housing--as was found to be the case in Petaluma (ibid., 69). In an unpublished paper for the Urban Land Institute, Paul L. Niebanck has found the same effects resulting from growth controls in Santa Cruz County, where he finds owner-occupied housing prices to be at least 10 percent higher after two years of control than they would be in the absence of such control (Niebanck 1989, 9).

Whatever these objections, it seems that impact fees are here to stay--not only in California, but across the nation. What is important is to find ways to rationalize them and make them more equitable. The first point, though, is that more research is needed. Though there are some empirical studies, as just mentioned, there is relatively little work of a fundamental or theoretical kind--and this is one of those areas where such work is not ivory-tower, but on the contrary is crucial for policy. Three important questions, at least, occur here--all of them prime candidates for research.

1. **The Politics of Growth Control.** The first is a study in politics and its underlying attitudes: to understand just why and where the growth control movement has developed in certain places and at certain times (Myers 1989, 10). It is not just a matter of elitism and exclusionary policies; in California, the movement is too widespread for that. Understanding why the movement is so

broadly-based is the first essential in devising politically-realistic policies to modify its impacts. But this can only be achieved through detailed local attitude surveys, backed by historical analysis of how the movements have arisen in particular places. As Dowell Myers stresses, such an analysis would need to encompass not merely group interests but also group norms, especially the underlying ideas of fairness that people hold.

2. **The Economics of Growth Control.** The second is to calculate more accurately the total economic impacts of a new development--they may be positive as well as negative--over time. This must seek to apportion the geographic impacts, since many effects--increased traffic, for instance--will wash right across the boundaries of the area where the development occurs. For this reason, one state, New Hampshire, is actively considering a uniform fee statewide (Baca 1989, Y27).

3. **The History of Growth Control.** The third is to study more intensively the existing attempts at growth management nationwide, and indeed in other countries (such as Great Britain) that have followed such policies over a long period. The objective here would be systematically to evaluate the successes and failures of such policies in terms of a number of criteria, not least their unintended effects. In particular, the study would need to disaggregate the impacts on different groups: old and new residents, those who are excluded from becoming residents, the rich, the poor, residents of neighboring localities, and so on. This study, as Myers' paper reminds us, would include an analysis of different physical forms of development under growth control, to see whether this element has any effect on both impacts and attitudes of those affected.

4. **Fiscal Alternatives to Impact Fees.** A final subject for research must clearly be alternative revenue-raising strategies, including the reform of the tax system, which still has to pay for much of the basic service provision

and will certainly have to do so in the future (Bay Area Council 1988b, 11-12). This should include the vexed question of reapportionment of tax and other local revenues. Again, the study would need to range both nationwide, and internationally, to look at possible ideas that have appeared to work elsewhere and might work here.

This research should prove valuable for policy formulation. But no one should ignore that growth control is an intensely political issue, which will be modified only by political action. California Assembly Speaker Willie Brown grasped the essential point when he said in an interview:

I think, in part, some of the communities do not wish to have introduced into their communities [sic] the different racial stocks and different backgrounds of people who are moving into California . . . The growth control problem cannot be handled by any given local community . . . So, if you start thinking in terms of control and planned growth, you really have to think regionwide and, in some cases, even statewide . . . The Bay Area lends itself best to the discussion in this regard . . . All of a sudden you've got to think of regional transportation. And if you are thinking regional transportation, you would think differently about the growth of opportunities and how to control growth . . . But, let me tell you, it will be at an incredible political cost. I am talking about local control types who don't want to give up one iota of their authority or their power (Tosta 1987, 15, 17).

That suggests two groups of approaches, one of which assumes intervention at a higher level than the individual community, the other of which does not.

1. **Higher-Level Intervention.** The State could intervene to create regional federations of local authorities, with responsibility to make a regional land use plan and to exact developer fees on a uniform basis regionwide. This regional authority could then be mandated to redistribute parts of both taxes and user fee revenues from one authority to another according to an agreed and legislated formula.

2. No Intervention. The State could compel local jurisdictions to state fully the basis of their exactions, as it is just now beginning to do. It could go further, and lay down a uniform basis for these formulas, applicable to every local authority (though perhaps with variations to reflect particular circumstances). It might enact a redistribution formula, whereby more fortunate authorities were compelled to subsidize heavily-impacted ones via a redistribution of the proceeds of property taxes and impact fees. Alternatively, and very radically, it could go back to an idea which the distinguished land economist Marion Clawson suggested to Californians over twenty years ago, which was to auction zoning permissions to the highest bidder (Clawson 1967, *passim*). The costs would still be passed on to the hapless buyer, but at least some sort of a market could be established and the process thereby brought under some kind of control.

Alternatively, of course, the State could try to find some additional or alternative source of local revenue--perhaps a local income tax, perhaps an extended sales tax or a value added tax, perhaps a "sin tax" on bars or porn movies, perhaps a state capital gains tax on real estate--which was reasonably buoyant and did not impact on existing property taxes. The prospects for this do not seem bright, but the research program outlined above would throw some light on experience elsewhere.

8. CHECKLIST: A RESEARCH AGENDA

If this brief overview has shown anything, it has shown that there is plenty of research to do. Here is a checklist, by no means complete:

1. **The Economic Future.** We need to follow up the valuable studies by the Bay Area Council, ABAG, and the Bay Area Forum, to ask: just how vulnerable are the key economic sectors to competition--internationally, nationally, and even intra-State? To some extent, this can draw on a wide review of the relevant economic literature. But this will need to be supplemented by interviews with key economic actors.

2. **Affordable Housing.** We badly require a study of existing and alternative ways of producing affordable housing in a context of escalating prices and exclusionary policies. This would disaggregate the problem to ask: affordable for whom? It would need, particularly, to look at the very different housing problems of different middle- and lower-income groups in a variety of geographical situations. Then it would need to review policy alternatives developed elsewhere in the United States and other developed countries, and ask how far these would be viable in the specific contexts of California and the Bay Area.

3. **Alternatives to Gridlock.** This, again, would be a comparative study. It would look at the specific phenomenon of transportation planning in fast-growing, polycentric, suburbanizing regions with a great variety of travel origins and destinations. It would seek to discover how far alternative policies have been developed elsewhere in the United States, and also in some western European countries affected by the same phenomenon (such as England, France, Holland, and West Germany). Again, it would ask how far such policies might be transferred and replicated in the Californian context.

4. **The History of Regionalism: Or, Why it all Went Wrong Before.** We need to go back to Michael Woo's classic Master's thesis (Woo 1975) to understand the dynamics, and in particular to appreciate the appalling complexity of the coalition-building--and, more importantly, the coalition-busting--process involved in trying to get region-wide government for the Bay Area. We then need to reinterpret his history in the light of the last fourteen years, and reapply his analysis to the very different world of California on the eve of the 1990s.

5. **Local Interest, Community Interest, and the Theory of Clubs.** We need to go back another way: to the classic work done by political scientists of the late 1950s and 1960s--Anthony Downs, James Buchanan, Gordon Tullock, Mancur Olson--to understand how individuals work politically to serve their self-interests (Downs 1957, Buchanan and Tullock 1962, Olson 1965, Tullock 1976). We need to apply this, specifically, to the contexts typical of California in the 1980s: rapid growth, spatially concentrated. The reason for doing this is to understand the circumstances in which they can be persuaded to come together in support of broader coalitions.

6. **The Costs and Benefits of Growth Management.** We need a comprehensive review, wider than anyone has done so far, that seeks to evaluate the economic impacts of a variety of growth management policies--including impact fees and development agreements--in California, nationwide, and internationally. This should seek to disaggregate, so far as possible, the impacts on different groups in the community.

7. **The Economics of Urban Form.** We need to scan a rather wide range of literature, some of it going a long way back, on how to estimate the impacts--direct and indirect--of different forms of urban development. Classic cost-benefit analyses of the 1960s and 1970s will provide a mine of information here. So, more recently, will Environmental Impact Assessments. Particularly

difficult is the question: how to quantify imponderables like the value of a landscape, or the impact of traffic noise? We should be warned that many rather sophisticated analysts have failed here--some of them rather badly.

During 1990, UC Berkeley's Institute of Urban and Regional Development will work towards a research agenda on as many of these fronts as possible. We are all conscious of the need to produce timely results, so as to provide useful input to important discussions that will be taking place on the region's possible future--above all, in Bay Vision 2020, a major new effort to reach a policy consensus, launched in December 1989.

Meanwhile, we will be encouraging our faculty associates to produce Working Papers of a more polemical nature, that seek to express informed personal views on the way the region ought to go and on the policies needed to take it that way. As said in the preface to this paper, IURD does not have a collective view. But it does exist as a forum to disseminate expert individual opinion. 1990 will be the year of the great Bay Area Debate. We invite the Berkeley faculty to bring all their considerable expertise to it. Our seminar room and our printing presses are waiting.

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